Astounding SCIENCE FICTION

JUNE

BRITISH 9d. EDITION

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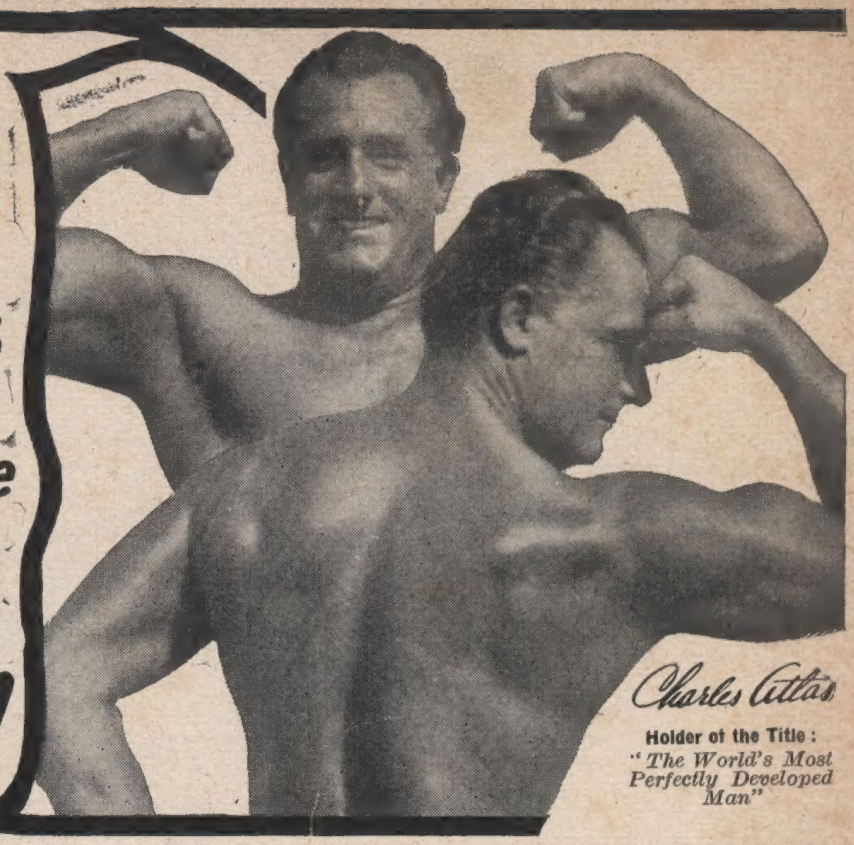

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Astounding SCIENCE FICTION

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All stories in this magazine are fiction. No actual persons are designated by name or character. Any similarity is coincidental.

IMPORTANT NOTICE—OUR NEXT ISSUE 1/-

Over a long period the publishers have been urged by many readers to enlarge the size of this magazine in order to include more of the contents of the original American edition, and in the latter part of last year they decided that it would be in the general interest of all its readers if this were done.

Owing to production difficulties, however, it was not possible to bring this alteration into effect until the August 1948 issue, which is the next to be published. The magazine in its new size will be on sale at *One Shilling*.

This increase in size involves a reduction in the quantity of magazines we can produce owing to our supply of paper being restricted by quota, and as there will be less copies on sale until the quota is increased we earnestly recommend you to place a regular order with your newsagent.

THERE IS NO DEFENSE

By THEODORE STURGEON

In the first place, it isn't true that "It takes two to make a quarrel." And in the end, it's proven that it takes nobody to make a very deadly quarrel indeed.

CURSING formality, Belter loosened his tunic and slouched back in his chair. He gazed at each of the members of the Joint Solar Military Council in turn, and rasped: "You might as well be comfortable, because, so help me, if I have to chain you to this table from now until the sun freezes, I'll run off this record over and over again until someone figures an angle. I never heard of anything yet, besides The Death, that couldn't be whipped one way or another. There's a weakness somewhere in this thing. It's got to be on the record. So we'll just keep at the record until we find it. Keep your eyes peeled and the hair out of your eyes. That goes for you too, Leess."

The bottled Jovian shrugged hugely. The infrared sensory organ on its cephalothorax flushed as Belter's words crackled through the translator. Glowering at the creature, Belter quenched a flash of sympathy. The Jovian was a prisoner in other things beside the bottle which supplied its atmosphere and gravity. Leess represented a disgraced and defeated race and its position at the conference table was a hollow honor—a courtesy backed by heat and steel and The Death. But Belter's glower did not change. There was no time, now, to sympathize with those whose fortunes of war were all bad ones.

Belter turned to the orderly and nodded. A sigh, compounded of worry and weariness, escaped the council as one man. The lights dimmed, and again the record appeared on the only flat wall of the vast chamber.

First the astronomical data from the Plutonian Dome, showing the first traces of the Invader approaching from the direction of the Lyran Ring—Equations, calculations, a sketch, photographs. These were dated three years back, during the closing phases of the Jovian War. The Plutonian Dome was not serviced at the time, due to the emergency. It was a completely automatic observatory, and its information was not needed during the interplanetary trouble. Therefore it was not equipped with instantaneous transmission, but neatly reeled up its information until it could be visited after the war. There was a perfectly good military observation base on Outpost, the retrograde moon of Neptune, which was regarded as quite adequate to watch the Solar System area. That is, there *had* been a base there—

But, of course, the Invader was well into the System before anyone saw the Pluto records, and by that time—

The wall scene faded into the transcript of the instantaneous message received by Terran HQ, which was rigged to accept any alarm from all of the watch posts.

The transcript showed the interior of the Neptunian military observatory, and cut in apparently just before the Sigmen heard the alarm. One was sprawled in a chair in front of the finder controls; the other, a rangy lieutenant with the burned skin of his Martian Colonial stock, stiffened, looked up at the blinking "General Alarm" light as the muted, insistent note of the "Stations" bell began to thrum from the screen. The sound transmission was very good; the council-

men could distinctly hear the lieutenant's sharp intake of breath, and his voice was quite clear as he rapped:

"Colin! Alarm. Fix!"

"Fix, sir," said the enlisted man, his fingers flying over the segmented controls. "It's deep space, sir," he reported as he worked. "A Jovian, maybe—flanking us."

"I don't think so. If what's left of their navy could make any long passes at all, you can bet it would be at Earth. How big is it?"

"I haven't got . . . oh, here it is, sir," said the e.m. "An object about the size of a Class III-A Heavy."

"Ship?"

"Don't know, sir. No heat radiation from any kind of jets. And the magnetoscope is zero."

"Get a chaser on him."

Belter's hands tightened on the table edge. Every time he saw this part of the record he wanted to get up and yell, *"No, you idiot! It'll walk down your beam!"* The chaserscope would follow anything it was trained on, and bring in a magnified image. But it took a mess of traceable vhf to do it.

Relaxing was a conscious effort. *Must be slipping,* he thought glumly, *wanting to yell at those guys. Those guys are dead.*

In the picture recording, a projection of the chaserscope's screen was flashed on the observatory screen. Staring fearfully at this shadow-picture of a shadow-picture, the council saw again the familiar, terrible lines of the Invader — squat, unlovely, obviously not designed for atmospheric work; slab-sided, smug behind what must have been foolproof meteor screens, for the ship boldly presented flat side and bottom plates to anything which might be thrown at her.

"It's a ship, sir!" said the e.m. unnecessarily. "Seems to be turning on its short axis. Still no drive emanations."

"Range!" said the lieutenant into a wall mike. Three lights over it winked on, indicating the batteries were manned and ready for ranging information. The lieutenant, his eyes fixed on the large indicators over the enlisted man's head, hesitated a moment, then said, "Automatics! Throw your ranging gear to our chaser."

The three lights blinked, once each. The battery reporters lit up, showing automatic control as the medium and heavy launching tubes bore round to the stranger.

The ship was still on the screen, turning slowly. Now a dark patch on her flank could be seen—an open port. There was a puff of escaping gas, and *something* appeared whirling briefly away from the ship, toward the scanner. They almost saw it clearly—and then it was gone.

"They threw something at us, sir!"

"Track it!"

"Can't, sir!"

"You saw the beginning of that trajectory! It was coming this way."

"Yes, sir. But the radar doesn't register it. I don't see it on the screen either. Maybe it's a warper?"

"Warpers are all theory, Colin. You don't bend radar impulses around an object and then restore them to their original direction. If this thing is warping at all, it's warping light. It—"

And then all but the Jovian closed their eyes as the screen repeated that horror—the bursting inward of the observatory's bulkhead, the great jagged blade of metal that flicked the lieutenant's head straight into the transmission camera.

The scene faded, and the lights went up.

"Slap in the next re— Hold it!" Belter said. "What's the matter with Hereford?"

The Peace delegate was slumped in his chair, his head on his arms, his arms on the table. The Martian Colonial representative touched him, and Hereford raised his seamed, saintly face:

"Sorry."

"You sick?"

Hereford sat back tiredly. "Sick?" he repeated vaguely. He was not a young man. Next to that of the Jovian, his position was the strangest of all. He represented a group, as did each of the others. But not a planetary group. He represented the amalgamation of all organized pacifistic thought in the System. His chair on the Joint Solar Military Council was a compromise measure, the tentative answer to an apparently unanswerable question—can a people do without the military? Many thought people could. Some thought not. To avoid extremism either way, the head of an unprecedented amalgamation of peace organizations was given a chair on the JSMC. He had the same vote as a planetary representative. "Sick?" he repeated in a whispering baritone. "Yes, I

rather think so." He waved a hand at the blank wall. "Why did the Invader do it? So pointless . . . so . . . so stupid." He raised puzzled eyes, and Belter felt a new kind of sympathy. Hereford's hollow-ground intelligence was famous in four worlds. He was crackling, decisive; but now he could only ask the simplest of questions, like a child too tired to be badly frightened.

"Yeah—why?" asked Belter. "Oh . . . never mind the rest of the record," he added suddenly. "I don't know how the rest of you feel, but at the moment I'm hypnotized by the jet-blasted thing.

"*Why,* Hereford wants to know. If we knew that, maybe we could plan something. Defenses, anyway."

Somebody murmured: "It's not a campaign. It's murder."

"That's it. The Invader reaches out with some sort of a short-range disrupting bomb and wipes out the base on Outpost. Then it wanders into the System, washes out an uninhabited asteroid beacon, drifts down through the shield-screening of Titan and kills off half the population with a cyanogen synthesizing catalyst. It captures three different scanner-scouts, holdng them with some sort of a tractor beam, whirling them around like a stone on a string, and letting them go straight at the nearest planet. Earth ships, Martian, Jovian—doesn't matter. It can outfly and outfight anything we have so far, except—"

"Except The Death," whispered Hereford. "Go on, Belter. I knew it was coming to this."

"Well, it's true! And then the cities. If it ever drops a disrupter like that"—he waved at the wall, indicating the portion of the record they had just seen—"on a large city, there wouldn't be any point in even looking for it, let alone rebuilding it. We can't communicate with the Invader—if we send out a general signal it ignores us, and if we send out a beam it charges us or sends one of those warping disrupter bombs. We can't even surrender to it! It just wanders through the System, changing course and speed from moment to moment, and every once in a while taking a crack at something."

The Martian member glanced at Hereford, and then away. "I don't see why we've waited so long. I saw Titan, Belter. In another century it'll be dead as Luna." He shook his head. "No pre-Peace agreement can stand in the way of the defense of the System, no matter how solemn the agreement was. I voted to outlaw The Death, too, I don't like the idea of it any more than . . . than Hereford there. But circumstances alter cases. Are we going to sacrifice everything the race has built just for an outdated principle? Are we going to sit smugly behind an idealistic scrap of paper while some secret weapon chops us down bit by bit?"

"Scrap of paper," said Hereford. "Son, have you read your ancient history?"

The translator hissed. Through it, Leess spoke. The flat, unaccented words were the barest framework for the anger which those who knew Jovians could detect by the sudden paling of the creature's sensory organ. "Leess object phrase secret weapon. Man from Mars suggest Invader Jovian work."

"Cool down, Leess," Belter said, reaching over and firmly putting the Martian back in his seat. "Hey you—watch your language or you'll go back to the canals to blow the rust off supersoy. Now, Leess; I rather think the delegate from Mars let his emotions get the better of him. No one thinks that the Invader is Jovian. It's from deep space somewhere. It has a drive far superior to anything we've got, and the armament . . . well, if Jupiter had anything like that, you wouldn't have lost the war. And then there was Titan. I don't think Jovians would kill off so many of their own just to camouflage a new secret weapon."

The Martian's eyebrows lifted a trifle. Belter frowned, and the Martian's face went forcibly blank. The Jovian relaxed.

Addressing the Council generally, but looking at the Martian, Belter gritted: "The war is over. We're all Solarians and the Invader is a menace to our System. After we get rid of the Invader we'll have time to tangle with each other. Not before. Is that clear?"

"No human trust Jupiter. No man trust Leess," sulked the Jovian. "Leess no think. Leess no help. Jupiter better off dead than not trusted."

Belter threw up his hands in disgust. The sensitivity and stubbornness of the Jovian were well known "If there's a clumsy, flat-footed way of doing things, a Martian'll find it." he growled. "Here we need every convolution of every brain here. The Jovian has a way of thinking different enough so he might help us crack this thing, and you have to go and run him out on strike."

The Martian bit his lips. Belter turned to the Jovian. "Leess, please—come off your high horse. Maybe the Solar System is a little crowded these days, but we all

have to live in it. Are you going to co-operate?"

"No. Martian man no trust Jupiter. Mars die, Jupiter die, Earth die. Good. Nobody not trust Jupiter." The creature creased inward upon itself, a movement as indicative as the thrusting out of a lower lip.

"Leess is in this with the rest of us," said the Martian. "We ought to—"

"That'll do!" barked Belter. "You've said enough, chum. Concentrate on the Invader and leave Leess alone. He has a vote on this council, and by the same token, he has the right to refrain from voting."

"Whose side are you on?" flashed the Martian, rising.

Belter came up with him, but Hereford's soft, deep voice came between them like a barrier. The Peace delegate said: "He's on the side of the System. All of us must be. We have no choice. You Martians are fighting men. Do you think you can separate yourselves from the rest of us and stop the Invader?"

Flushed, the Martian opened his mouth, closed it again, sat down. Hereford looked at Belter, and he sat down, too. The tension in the chamber lessened, but the matter obviously relegated itself to the "For Further Action" files in at least two men's minds.

Belter gazed at his fingers until they would be still without effort, and then said quietly: "Well, gentlemen, we've tried everything. There is no defense. We've lost ships, and men, and bases. We will lose more. If the Invader can be destroyed, we can be sure of a little time, at least, for preparation."

"Preparation?" asked Hereford.

"Certainly! You don't think for a minute that that ship isn't, or won't soon be, in communication with its own kind? Suppose we can't destroy it. It will be able to go back where it came from, with the news that there's a culture here for the taking, with no weapon powerful enough to touch them. You can't be so naive as to believe that this one ship is the only one they have, or the only one we'll ever see! Our only course is to wipe out this ship and then prepare for a full-scale invasion. If it doesn't come before we're prepared, our only safe course will be to carry the invasion to them, wherever they may be!"

Hereford shook his head sadly. "The old story."

Belter's fist came down with a crash. "Hereford. I *know* that Amalgamated Peace is a great cultural stride forward. I *know* that to de-condition the public on three planets and a hundred colonies from the peaceful way of life is a destructive move. But—can you suggest a way of keeping the peaceful way and saving our System? Can you?"

"Yes . . . if . . . if the Invaders can be persuaded to follow the peaceful way."

"When they won't communicate? When they commit warlike acts for nothing—without plan, without conquest, apparently for the sheer joy of destruction? Hereford—we're not dealing with anything Solarian. This is some life-form that is so different in its aims and its logic that the only thing we can do is reciprocate. Fire with fire! You talk of your ancient history. Wasn't fascism conquered when the democratic nations went all but fascist to fight them?"

"No," said Hereford firmly. "The fruits of fascism were conquered. Fascism itself was conquered only by democracy."

Belter shook his head in puzzlement. "That's irrelevant. I . . . think," he added, because he was an honest man. "To get back to the Invader: we have a weapon with which we can destroy him. We can't use it now because of Peace Amalgamated; because the Solarian peoples have determined to outlaw it forever. The law is specific: The Death is not to be used for any purposes, under any circumstances. We, the military, can say we want it until our arteries harden, but our chances of getting it are negligible unless we have public support in repealing the law. The Invader has been with us for eighteen months or more, and in spite of his depredations, there is still no sign that the public would support repeal. Why?" He stabbed out a stumpy forefinger. "Because they follow *you,* Hereford. They have completely absorbed your quasi-religious attitude of . . . what was your phrase?"

" 'Moral Assay'."

"Yeah—Moral Assay. The test of cultural stamina. The will power to stand up for a principle in spite of emergencies, in spite of drastic changes in circumstances. A good line, Hereford, but unless you retract it, the public won't. We could bulldoze 'em into it, maybe; and maybe we'd have a revolution on our hands, get a lot of people killed, and wind up with a bunch of dewy-eyed idealists coming out on top, ready to defend the principles of peace with guns if they have to draft every able-bodied Solarian in the System. Meanwhile, the Invader—and perhaps, by that time, his pals—will continue to

circulate around, taking a crack at any target he happens to admire. Already the crackpots are beginning to yell about the Invader being sent to test their love of peace, and calling this the second year of the Moral Assay."

"He won't back down," said the Martian suddenly. "Why should he? The way he is, he's set for life."

"You have a lousy way of putting things!" snapped Belter, wondering *How much does personal power mean to the old saint?*

"Why this pressure?" asked Hereford gently. "You, Belter, with your martial rationalizing, and our Martian colleague here with his personal insults—why not put it to a vote?"

Belter studied him. Was there a chance that the old man would accept the wishes of the majority here? The majority opinion of the Council was not necessarily the majority opinion of the System. And besides—how many of the Council would go along with Hereford if he chose to vote against it?

He took a deep breath. "We've got to know where we stand," he said. "Informally, now—shall we use The Death on the Invader? Let's have a show of hands."

There was a shuffling of feet. All the men looked at Hereford, who sat still with his eyes downcast. The Martian raised his hand defiantly. The Phoebe-Titan Colonial delegate followed suit. Earth. The Belt. Five, six—eight. Nine.

"Nine," said Belter. He looked at the Jovian, who looked back, unblinking. Not voting. Hereford's hands were on the table.

"That's three-quarters," Belter said.

"Not enough," answered Hereford. "The law stipulates *over* three-quarters."

"You know what my vote is."

"Sorry, Belter. You can't vote. As chairman, you are powerless unless all members vote, and then all you can do is establish a tie so that the matter can be referred for further discussion. The regulations purposely keep a deciding vote out of the Chair, and with the membership. I . . . frankly, Belter, I can't be expected to go further than this. I have refrained from voting. I have kept you from voting. If that keeps The Death from being used—"

Belter's knuckles cracked. He thought of the horror at Outpost, and the choking death on Titan, and what had happened to their asteroid. It and its abandoned mine workings had flared up like a baby nova, and what was left wouldn't dirty a handkerchief. It was a fine thing for every Solarian that at long last a terrible instrument of war had been outlawed, this time by the unquestionable wish of the people. It would be a bad thing for civilization if an exception should be made to this great rule. It was conceivable that, once the precedent was established, the long-run effects on civilization would be worse than anything the Invader could do. And yet—all his life Belter had operated under a philosophy which dictated action. Do something. It may be wrong, but—*do* something.

"May I speak with you alone?" he asked Hereford.

"If it is a matter which concerns the Council—"

"It concerns you only. A matter of ideology."

Hereford inclined his head and rose. "This won't take long,' 'said Belter over his shoulder, as he let the peace delegate precede him into an antechamber.

"Beat it, Jerry," he said to the guard. The man saluted and left.

Belter leaned back against a desk, folded his arms and said: "Hereford, I'm going to tear this thing right down to essentials. If I don't, we can spend the rest of our lives in arguing about social necessities and cultural evolution and the laws of probability as applied to the intentions of the Invader. I'm going to ask you some questions. Simple ones. Please try to keep the answers simple."

"You know I prefer that."

"You do. All right—the whole basis of the Peace movement is to prevent fighting, on the grounds that there is always a better way. Right?"

"That is right."

"And the Peace movement recognizes no need for violence in any form, and no conceivable exception to that idea."

"That is right."

"Hereford—pay close attention. You and I are in here because of the Invader, and because of the refusal of Peace Amalgamated to allow the use of the only known counter-measure."

"Obviously."

"Good. Just one more thing. I hold you in higher regard than any other man I know. And the same goes for the work you have done. Do you believe that?"

Hereford smiled slowly and nodded. "I believe it."

"Well, it's true," said Belter, and with all his strength brought his open hand across Hereford's mouth.

The older man staggered back and

stood, his fingers straying up to his face. In his eyes was utter unbelief as he stared at Belter, who stood again with his arms folded, his face impassive. The disbelief was slowly clouded over by puzzlement, and then hurt began to show. "Why—"

But before he could say another word, Belter was on him again. He crossed to Hereford's chest, and when the Peace delegate's hands came down, he struck him twice more on the mouth. Hereford made an inarticulate sound and covered his face. Belter hit him in the stomach.

Hereford moaned, turned, and made for the door. Belter dove, tackled him. They slid into a thrashing heap on the soft carpeting. Belter rolled clear, pulled the other to his feet and hit him again. Hereford shook his head and began to sink down, his arms over his head. Belter lifted him again, waited for just the right opening, and his hand flashed through for still another stinging slap across the mouth. Hereford grunted, and before Belter quite knew what was happening, he came up with one great blasting right that landed half on Belter's dropped chin, half on his collar bone. Belter came up off the floor in a cloud of sparks and fell heavily six feet away. He looked up to see Hereford standing over him, big fists bunched.

"Get up," said the Peace delegate hoarsely.

Belter lay back, put his hands under his head, spat out some blood, and began to laugh.

"Get up!"

Belter rolled over and got slowly to his feet. "It's all over, Hereford. No more rough stuff, I promise you."

Hereford backed off, his face working. "Did you think," he spat, "that you could resort to such childish, insane measures to force me into condoning murder?"

"Yup," said Belter.

"You're mad," said Hereford, and went to the door.

"Stop!"

There was a note of complete command in Belter's voice. It was that note, and the man behind it, which had put Belter where he was. Equally startling was the softness of his voice as he said: "Please come here, Hereford. It isn't like you to leave a thing half understood."

If he had said "Half-finished," he would have lost the play. Hereford came slowly back, saying ruefully: "I know you, Belter. I know there's a reason for this. But it better be good."

Belter stood where he had been, leaning against the desk, and he folded his arms. "Hereford," he said, "one more simple question. The Peace movement recognizes no need for violence in any form, and no conceivable exception to that idea." It sounded like a recording of the same words, said a few minutes before, except for his carefully controlled breathing.

Hereford touched his bruised mouth. "Yes."

"Then," Belter grinned, "why did you hit me?"

"Why? Why did you hit *me*?"

"I didn't ask you that. Please keep it simple. Why did you hit me?"

"It was . . . I don't know. It happened. It was the only way to make you stop."

Belter grinned. Hereford stumbled on. "I see what you're doing. You're trying to make some parallel between the Invader and your attack on me. But you attacked me unexpectedly, apparently without reason—"

Belter grinned more widely.

Hereford was frankly floundering now. "But I . . . I had to strike you, or I . . . I—"

"Hereford," said Belter gently, "shall we go back now, and vote, before that eye of yours blackens?"

The three Death ships, each with its cover of destroyer escorts, slipped into the Asteroid Belt. *Delta,* the keying unit, was flanked on each side by the opposed twins *Epsilon* and *Sigma,* which maintained a rough thousand-mile separation from the key. Behind them, on Earth, they had left a froth of controversy. Editorial comment on the air and in print, both on facsimile and the distributed press, was pulling and hauling on the age-old question of the actions of duly elected administrators. We are the people. We choose these men to represent us. What must we do when their actions run contrary to our interest?

And—do they run contrary? How much change can there be in a man's attitude, and in the man himself, between the time he is elected and the time he votes on a vital measure? Can we hark back to our original judgment of the man and trust his action as we trusted him at election time?

And again—the old bugaboo of security. When a legislative body makes a decision on a military matter, there must be news restrictions. The Death was the supreme weapon. Despite the

will of the majority, there were still those who wanted it for their own purposes; people who felt it had not been used enough in the war; others who felt it should be kept assembled and ready, as the teeth in a dictatorial peace. As of old, the mass of the people had to curb its speech and sometimes its thought, to protect itself against the megalomaniac minorities.

But there was one man who suffered. Elsewhere was anger and intellectual discourse, ethical delvings and even fear. But in one man, supremely, existed the struggle between ethics and expediency. Hereford alone had the power to undo his own work. His following would believe and accept when he asked them to make this exception. Having made it, they would follow no more, and there was no place for him on Earth.

His speech had been simple, delivered without a single flickering of his torture on the fine old face. Once the thing was done, he left Earth in a way foreign to everything he had ever believed, or spoken, or recommended. He, the leader of Peace Amalgamated, who regarded with insistent disfavor the very existence of weapons, left Earth with Belter, and shared the officer's quarters of a warship. Not only was it a warship, but it was the keying unit *Delta*, under the command of "Butcher" Osgood, trigger man of The Death.

For months they tracked the Invader, using their own instruments and information relayed to them by various outposts. Under no circumstances did they use tracers. One observation post and seven warships had been crushed because of that. The Invader's reaction to a tight beam was instant and terrible. Therefore, they were limited to light reflection—what there was of it, even from the bold, bright flanks of the marauder —and the detection of the four types of drive radiations used by the ship at different accelerations.

The body of descriptive matter on the Invader increased, and there were certain irrefutable conclusions. The crew of the Invader were colloidal life, like all known life, and would be subject to The Death. This was deduced by the fact that the ship was enclosed, pressurized and contained an atmosphere of some sort, which precluded the theoretically suggested "energy" and "crystalline" lifeforms. The random nature of the enemy's vicious and casual attacks caused more controversy than almost any other factor; but as time went on, it became obvious that what the ship was doing was calling forth any attack of which the System might be capable. It had been bombed, rayed, and attempts had been made to ram. It was impervious. How long would it stay? When would its commanders conclude that they had seen the worst, and laughing go back into the depths to bring reinforcements? And was there anything—anything at all—besides The Death that could reach the Invader, or stop him, or destroy him, or even let him know fear?

Right up until D-day—Death-day—the billions who had followed Hereford hoped that some alternative could be found, so that at least their earlier resolutions would be followed in letter if not in spirit. Many of them worked like slaves to this end, and that was the greatest anomaly of all, for all the forces of Peace were engaged in devising deadly methods and engines for use as alternatives to The Death. They failed. Of course they failed.

There came a day when they had to strike. The Invader had all but vanished into the celestial north, only to come hurtling back in a great curve which would pass through the plane of the ecliptic just beyond the orbit of Jupiter. The Invader's trajectory was predictable despite his almost unbelievable maneuverability—even for him there were limits of checking and turning, which was another fact indicating colloidal life. There was no way of knowing whether he was coming back to harass the planets, or whether he was making one last observation before swinging through the System and away from Sol, back to the unknown hell which had spawned him. But whether it was attack or withdrawal, he had to be smashed. There might never be another chance.

The three Death ships moved out from the Belt, where they had lain quiet amongst the other masses floating in that great ring of detritus. Still keeping their formation, they blasted away with a crushing acceleration, their crews dopey with *momentomine*. Their courses were set to intersect that of the Invader, or close enough to bring them well within range of The Death—twelve to twenty thousand miles. Delicate, beamless scanners checked the enemy's course moment by moment, making automatic corrections and maintaining the formation of the three ships.

Delta was Earth-manned, *Epsilon* a Martian ship, and *Sigma* belonged to the

Colonials. Originally, the plan had been to scatter Colonials through the three ships, and use a Jovian craft. But Leess, as the Jovian representative, had vetoed any Jovian participation, an action which had brought about a violent reawakening of antipathies toward the major planet. Public feeling was so loaded against the use of The Death that the responsibility must be shared. Jupiter's stubborn and suicidal refusal to share it was inflexible; the Jovian delegate's feelings were hurt, and Jovian solidarity was as thorough as ever.

Four days out, the master controls dropped the acceleration to 1 G, and the air conditioners blasted out enough suproxygen to counteract the acceleration drug. Personnel came to full life again, and the command gathered on the bridge of *Delta*. Hereford was there too, standing well back, his face misleadingly calm, his eyes flicking from the forward screen to the tactical chart, from Belter's absorbed face to the undershot countenance of Commander Osgood.

Osgood looked over his shoulder at the Peace leader. His voice was gravel in a wire sieve as he said: "I still don't like that guy hanging around here. You sure he won't be better off in his quarters?"

"We've been over that," said Belter tiredly. "Commander, maybe I'm out of order, but would it be too much trouble for you to speak directly to him once in a while?"

"I am satisfied," smiled Hereford. "I quite understand his attitude. I have little to say to him, and much to say about him, which is essentially his position as far as I am concerned. It is no more remarkable that he is unfamiliar with politeness than that I should be ignorant of spatial ballistics."

Belter grinned. "O.K., O.K.—don't mind me. I'm just a poor military man trying to make peace. I'll shut up and let you and the Butcher have your inimical *status quo*."

"I'll need a little quiet here for a while, if it's all the same to you, Councilman," said Osgood. He was watching the tactical chart. The red spot representing *Epsilon* was at the far right, the blue of *Sigma* at the left, and down at the bottom was *Delta's* green spark. A golden bar in the center of the chart showed the area on the ecliptical plane at which the Invader could be expected to pass through, and just above it was a white spot showing the Invader himself.

Osgood touched a toggle which added a diagram to the chart—a positioning diagram showing the placement of the three Death ships in relation to the target. *Sigma* and *Epsilon* were exactly in the centers of their white positioning circles; *Delta* was at the lower edge of the third circle. Osgood made a slight adjustment in the drive circuit.

"Positioning is everything," Belter explained to Hereford. "The Death field is a resultant—a violent nod of vibrations centering on the contiguous focal points of the opposed fields from *Sigma* and *Epsilon*. The beam from *Delta*—that's us—kicks it off. There's an enormous stress set up at that focal point, and our beam tears into it. The vibration changes frequency at random and with violence. It has been said that the fabric of space itself vibrates. That's learned nonsense. But fluids do, and gases, of course, and colloids worst of all."

"What would happen if the positions were not taken exactly?"

"Nothing. The two focal points of the concentrated fields from *Epsilon* and *Sigma* would not coincide, and *Delta's* beam would be useless. And it *might* have the unhappy result of calling the Invader down on us. Not right away—he's going too fast at right angles to our course—but I'm not crazy about the idea of being hunted down by that executioner."

Hereford listened gravely, watching Osgood, watching the chart. "Just how great is the danger of The Death's spreading like ripples in a pool—out in every direction from the node?"

"Very little, the way it's set up. The node moves outward away from our three ships—again a resultant, strictly according to the parallelogram of force. How long it lasts, how intense it gets, how far it will go—we never know. It changes with what it encounters. Mass intensifies it and slows it down. Energy of almost any kind accelerates and gradually seems to dissipate it. And it varies for other reasons we don't understand yet. Setting it up is a very complicated business, as you have seen. We don't dare kick it off in such a way that it might encounter any of the planets, if it should happen to last long enough. We have to clear space between us and Outside of all shipping."

Hereford shook his head slowly. "The final separation between death and de-

struction," he mused. "In ancient times, armies met on battlefields and used death alone to determine the winner. Then, gradually, destruction became the most important factor—how much of the enemy's materiél could you destroy? And then, with the Atomic Wars, and the Dust, death alone became the end of combat again. Now it has come full circle, and we have found a way to kill, to punish and torture, to dissolve, slowly and insistently, colloidal cells, and still leave machines unharmed. This surpasses the barbarism of jellied gasoline. It takes longer, and—"

"It's complete," Belter finished.

"Stations!"

Osgood's voice sliced raggedly through the quiet bridge. The screen-studded bulkhead beside him winked and flickered with acknowledgments, as tacticians, technicians, astrogators, ballistics men, and crewmen reported in. All three ships were represented, and a master screen collected and summarized the information, automatically framing the laggards' screen with luminous red. There was little of the red showing, and in seconds it disappeared. Osgood stepped back, glanced at the master screen and then at the chart. On it, the ship symbols were centered in their tactical circles.

The commander turned away and for the first time in these weary months he spoke directly to Hereford: "Would you like the honor of triggering?"

Hereford's nostils dilated, but his voice was controlled. He put his hands behind his back. "Thank you, no."

"I thought not," said the Butcher, and there was a world of insult in his scraping voice.

Before him was a triangular housing from which projected three small levers with round grips. One was red, one blue. The third was set between and in front of the others, and was green. He pulled the two nearest him. Immediately a red line appeared on the chart, running from *Espilon's* symbol to the golden patch, and a blue line raced out from *Sigma* to meet it. Just above the gold hovered the white spot representing the Invader. Osgood watched it narrowly as it dipped toward the gold and the junction of the red and blue lines. He rested his hand on the green lever, made one last brief check of the screens, and snatched it back. Obediently, a thin, bright green line appeared on the chart. A purple haze clouded the gold.

"That's it!" breathed Belter. "The purple, there—The Death!"

Hereford, shaking, leaned back against the bulkhead. He folded his arms, holding tightly to his elbows, obviously trying to get a grip on much more.

"Scan him!" spat Osgood. "This I've got to see!"

Belter leapt forward. "Commander! You don't . . . you *can't* beam him! Remember what happened at Outpost?"

Osgood swore. "We've got so much stuff between here and there already that a scanning beam isn't going to make that much difference. He's done, anyway!" he added exultantly.

The large scanning screen flicked into colors which swirled and fused into the sharp image of the Invader. Since the beam tracked him exactly, there was no sign of motion. "Get me a diagrammatic!" bellowed Osgood. His small eyes were wide, his cheeks puffed out, his lips wet.

The lower quarter of the screen faded, went black, then suddenly bore a reduced image of the Invader. Apparently creeping toward him was a faint, ever-brightening purple mist.

"Right on the nose!" gritted Belter. "He's sailing right into it!"

Startlingly, the large actual image showed signs of life. A stream of blue-white fire poured out of the ship's side.

"What do you know!" whistled Osgood. "He's got jets after all! He knows there's something ahead of him, doesn't know what it is, and is going to duck if he has to smear his crew all up and down the bulkheads!"

"Look!" cried Belter, pointing at the chart. "Why, he's pulling into a curve that . . . that—Man, oh man, he's killing off all hands! He can't turn like that!"

"Maybe he wants to get it over with quickly. Maybe he's run into The Death somewhere before," crowed Osgood. "Afraid to face it. Hey, Belter, the inside of that ship's going to be a pretty sight. The Death'll make jelly of 'em, and that high-G turn'll lay the jelly like paint out of an airbrush!"

"Ex . . . ex—" was as much as Hereford could say as he turned and tottered out. Belter took a step after him, hesitated, and then went back to stand before the chart.

Purple and gold and white, red and green and blue coruscated together. Slowly, then, the white spot moved toward the edge of the puddle of color.

"Commander! He's still side-jetting!"

"Why not?" said the Butcher gleefully. "That's the way his controls were set

when his command got emulsified. He'll blow off his fuel in a while, and we can board him."

There was a soft click from the master communications screen and a face appeared on it. *"Epsilon,"* the man said.

"Good work, Hoster," said Osgood, rubbing his hands.

"Thank you, sir," said the captain of the Martian vessel. "Commander, my astrogators report an extrapolation of the derelict's change of course. If he keeps jetting, he's going to come mighty close."

"Watch him then," said Osgood. "If he comes too close, get out of his way. I'll stake my shoulder-boards on your safety." He laughed. "He's a dead duck. You'll be able to clear him. I don't care if it's only by fifty meters."

The Martian saluted. Osgood checked him before he could fade. "Hoster!"

"Yes sir."

"I know you Martians. Trigger happy. Whatever happens, Hoster, you are not to bomb or ray that derelict. Understand?"

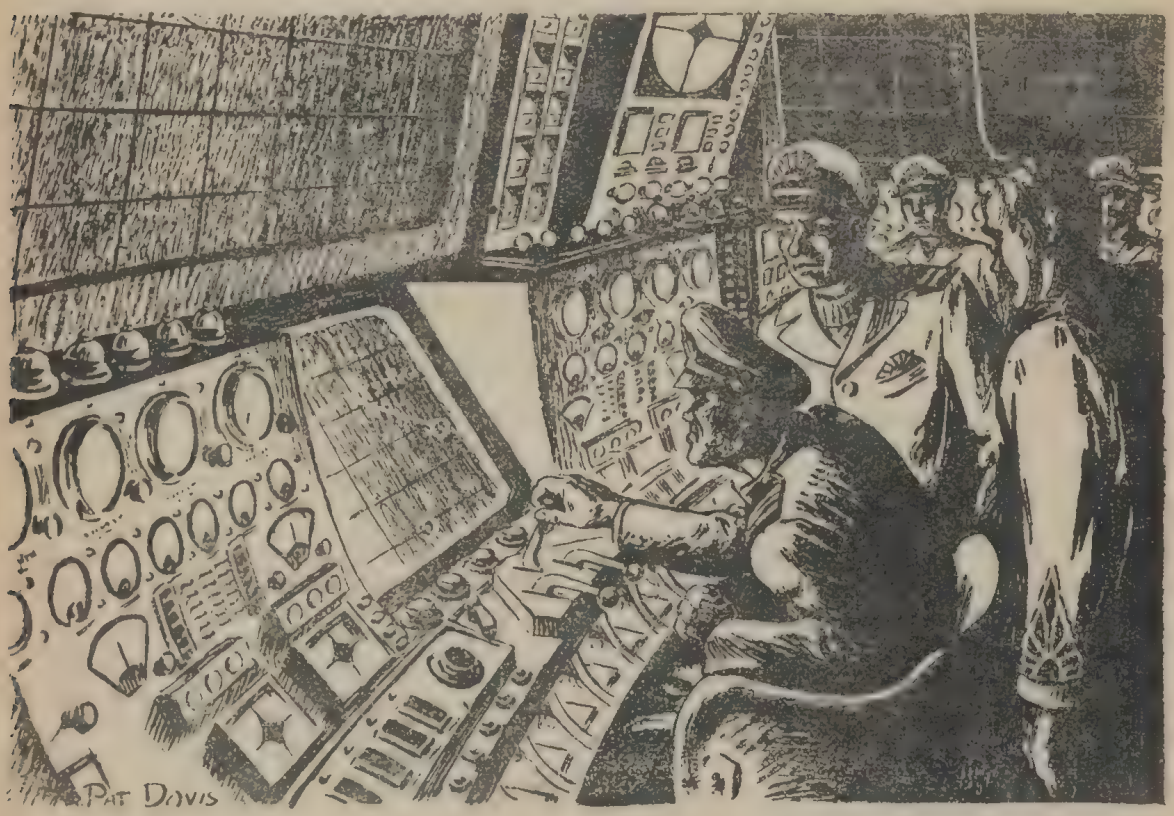
"Roger, sir," said the Martian stiffly, and faded.

"Those Martians," said Osgood. "Bloodthirsty bunch."

Belter said: "Commander, sometimes I understand how Hereford feels about you."

"I'll take that as a compliment," said the Butcher.

They spent the next two hours watching the tactical chart. The Death generators had long ago been cut out, and The Death itself showed on the chart as a dwindling purple stain, headed straight Outside and already fading. But the derelict was still blasting from its side jets, and coming about in an impossible curve. The Martian astrogators had been uncomfortably right, and Captain Hoster had been instructed to take evasive action.



Closer and closer came the white spot to the red one that was *Epsilon*. Viewers were clamped on both ships; the Martian had begun to decelerate powerfully to get out of that ratiocinated curve.

"Doesn't look so good," said Belter, after a careful study of the derelict's trajectory.

"Nonsense," said Osgood worriedly. "But it'd be more than a little silly to lose a ship after we've whipped the enemy." He turned to the control bulkhead. "Get me *Epsilon*."

He had started his famous monotone of profanity before the screen had finally lit up. Hoster's face was flushed—blotched, really. "What's the matter?" snapped Osgood. "You take your own sweet time answering. Why haven't you taken any *momentomine?*"

Captain Hoster clutched the rim of his communicator. "Lissen," he said thickly. "'Nvader out t' get us, see. Nobody push Martian around. 'S dirty Jovian trick."

"Acceleration disease," said Belter quietly. "He must've had some crazy idea of keeping away from the drug so he'd be able to keep on the alert."

"Hoster! You're hopped up. You can't take *momentomine* for as many years as you have and stay sober under deceleration without it. You're relieved. Take a dose and turn in. Put your second on."

"Lissen, Butch, ol' horse," mouthed the Martian. "I know what I'm doin', see? I don't want trouble with *you.* Busy, see? Now, you jus' handle your boat an' I'll handle mine. I'm gonna give that Jovian a case of Titanitis 'f 'e gets wise with me." And the screen went blank.

"Hoster!" the commander roared. "Sparks! Put that maniac on again!"

A speaker answered promptly: "Sorry, sir. Can't raise him."

In helpless fury Osgood turned to Belter. "If he so much as throws a dirty look at that derelict, I'll break him to an ammo passer and put him on the sun side of Mercury. We *need* that derelict!

"What for?" asked Belter, and then wondered why he had asked, for he knew the answer. Hereford's influence, probably. It would be Hereford's question, if he were still here.

"Four drives we don't know anything about. A warp-camouflaged disrupter bomb. A chain-instigating ray, that blew up the asteroid last year. And probably lots more. Man, that's a *war*ship!"

"It sure is," said Belter. "It certainly is." *Peace Amalgamated,* he thought. *A great step forward.*

"Get 'em both on a screen," Osgood rapped. "They're close enough—Hey, Belter, look at the way that ship is designed. See how it can check and turn that way?"

"No, I—Oh! I see what you mean. Uses lateral jets—but what laterals!"

"Functional stuff," said Osgood. "We could've had that a hundred years ago, but for naval tradition. We put all our drive back aft. We get a good in-line thrust sure. But look what he's got! The equivalent of ten or twelve of our stern-tube assemblies. What kind of people were they, that could stand that kind of thing?"

Belter shook his head. "If they built it that way, they could stand it." He looked thoughtfully up at the derelict's trajectory. "Commander, you don't suppose—"

Apparently struck by the same awful thought, Osgood said uneasily, "Certainly not, The Death. They went through The Death."

"Yes," said Belter. He sounded relieved, but he did not feel relieved. He watched the screen, and then clutched Osgood's arm.

Osgood swore and sprang to the control bulkhead. "Get *Epsilon!* Tell him to cease fire and then report to me! Blast the hub-forted fun of a plistener! I'll pry him loose from his—"

Belter grunted and threw his arm over his eyes as the screen blazed, the automatic shields went up, and when he could see again, the screen showed him the Invader. *Epsilon* wasn't there at all.

After the excitement had died down a little, Osgood slumped into a chair. "I wish we'd had a Jovian ship out there instead," he rasped. "I don't care what they did to us during the war, or anything else. They could obey orders. When they say they'll do a thing, you can bet on it. What's the score on that business of the Jovians electing themselves out, anyhow?"

Belter told him how the Jovian delegate had been insulted at the Council.

"Those hot-headed, irresponsible Martians!" said the Butcher. "Why in time did that drunken cretin have to fire on the derelict?"

"What derelict?" Belter asked dryly.

Osgood stared at him. Belter pointed at the chart. The white spot was slowly swinging toward the green—toward *Delta.* On the screen, the Invader still gleamed. It was not blasting any more.

One of the technician's screens flashed. "Detection reporting, sir."

"Report."

"Invader's Type Two drive radiation showing strong, sir."

"R-Roger."

The screen winked out. Commander Osgood opened his mouth, held it open silently for an unbearably long moment, and then carefully closed it again. Belter bit the insides of his cheeks to keep from roaring with hysterical laughter. He knew that the Butcher was trying to swear, and that he had met a situation for which no swearing would be adequate.

He had shot his vituperative bolt. Finally, weakly, he said the worst thing he could think of—a thing that until then had been unthinkable.

He said: "They're not dead."

Belter did not feel like laughing any more. He said: "They went through The Death, and they're not dead."

"There is no defense against The Death," said the commander authoritatively. Belter nodded.

One of the screens flashed, and a voice said impersonally: "Mathematics."

"Go on," said the Butcher.

"The derelict's course will intersect ours, sir, unless—"

"Don't say 'derelict,'" whispered Osgood. "Say 'Invader.'" He lay back and, closing his eyes, swabbed his face with a tissue. Then the muscles in his jaw clenched and he rose and stood erect before the control bulkhead, pulling the wrinkles out of his tunic. "Batteries. Train around to the Invader. Tech! Put the batteries on auto. Everything—torpedoes, rays, artillery. Now give me all hands. All hands! Prepare to abandon ship. *Delta* will engage the enemy on automatics. Lifecraft to scatter. Take your direction from your launching port and maintain it until you observe some decisive action between *Delta* and the Invader. Fill up with *momentomine* and give your craft everything they can take. Over." He swung to Belter.

"Councilman! Don't argue with me. What I want to do is stay here and fight. What I *will* do is abandon ship with the rest of you. My only reason is so I can have another chance to take a poke at a Martian. Of all the blundering, stupid, childish things for Hoster to do, taking a pot shot at that killer out there was the most—"

Belter very nearly reminded the commander that Hoster had been instructed to let the "derelict" pass within fifty meters if necessary. He swallowed the comment. It didn't matter, anyway. Hoster and his crew had been good men, and *Epsilon* a good ship. All dead now, all smashed, all gone to lengthen the list that had started on Outpost.

"You know your abandon-ship station, don't you, Belter? Go to your quarters and haul out that white-livered old pantywaist and take him with you. I'll join you as soon as everyone else is off the ship. Jump!"

Belter jumped. Things were happening too fast for him, and he found it almost pleasant to use someone else's intelligence rather than hunt for his own.

Hereford was sitting on the edge of his bunk. "What's the matter, Belter?"

"Abandon ship!"

"I know that," said the older man patiently. "When they have an 'all hands' call on one of these ships there's no mistaking it. I want to know what's the matter."

"We're under attack. Invader."

"Ah." Hereford was very calm. "It didn't work."

"No," said Belter. "It didn't."

"I'll stay here, I think."

"You'll *what?*"

Hereford shrugged. "What's the use? What do you think will happen to the peaceful philosophy when news gets out that there is a defense against The Death? Even if a thousand or a million Invader ships come, nothing will keep us from fighting each other. I'm—tired."

"Hereford." He waited until the old man lifted his head, met his eyes. "Remember that day in the anteroom? Do we have to go through that again?"

Hereford smiled slowly. "Don't bother, friend. You are going to have trouble enough after you leave. As for me—well, the most useful thing I can be now is a martyr."

Belter went to the bulkhead and pressed into his personal storage. He got his papers and a bottle of viski. "All right," he said, "let's have a quick one before I go." Hereford smiled and accepted. Belter put all the *momentomine* in Hereford's drink, so that when they left the ship he, Belter, passed out cold. From what he heard later he missed quite a show. *Delta* slugged it out with the Invader. She fought until there was nothing but a top turret left, and if kept spitting away at the enemy until a disrupter big enough for half a planet wiped it out. She was a good ship too. The Invader went screaming up into the celestial north again, leaving the terrified *Sigma* alone. Belter regained consciousness in the life craft along with the commander and Hereford. Hereford looked like an illustration in the Old Testament which Belter had seen when he was a child. It was captioned "And Moses Threw Down and Broke the Two Tablets of Stone."

Sigma picked them up. She was a huge old Logistics vessel, twice reconverted—once from the Colonial Trade, once as the negative plant of The Death. She had a main hold in her like a convention hall, and a third of it was still empty in spite of the vast pile plant she

carried. Her cargo port was open, and *Delta's* life craft were being warped in and stacked inside, along with what wreckage could be salvaged for study.

The place was a hive. Space-suited crews floated the boats in, handling them with telescoping rods equipped with a magnetic grapple at each end. One end would be placed on the hull of a boat, the other on the deck or bulkhead or on a stanchion; and then by contracting or expanding the rod by means of its self-contained power unit, the boat would be pushed or pulled to its stack.

The boats had completed their rendezvous after two days of signalling and careful jetting. All were accounted for but two, which had probably tangled with débris. The escape of so many was largely due to the fact that there was very little wreckage large enough to do any damage after the last explosion.

Osgood's boat hovered outside until the last, and by the time it was warped in all the others had unloaded and their crews were inboard, getting refreshment and treatment. By the time the little "Blister" had been racked, the cargo port was sealed and the compartment refilled with air. *Sigma's* captain opened the boat's hatch with his own hands, and Osgood crawled out, followed by a dazed Belter and a sullen Hereford.

"Your ship, sir," said the captain of *Sigma,* formally, in the traditional presentation of a ship and its facilities to a superior.

"Yeah. I need one at the moment," said the Butcher wryly. He stretched, looked around. "Get any parts of the Martian?"

"No, sir," said the captain. He was a worried-looking, gangly specimen from the Venusian Dome. His name had so many syllables that only the first three were used. They were Holovik. "And little enough from *Delta,* I'm sorry to say. Wh . . . what happened?"

"You saw it, didn't you? What do you think?"

"It seemed as if the . . . the Invader—"

"I'll say it, if you can't get it out," said Osgood bluntly. "He has a defense against The Death. Isn't that fine?"

"Yes, sir." The horizontal lines across Captain Holovik's forehead deepened, and the corners of his mouth turned down. "Fine."

"Don't burst into tears!" snapped the commander. He looked around, taking stock of the salvage. "Get all available techs on that scrap. Find out if any of it is radioactive, and if so how much of what type. What's that?"

"That" was a thirty-foot tapered cylinder with three short mast antennae projecting at right angles to the long axis, near each rounded end.

"I don't know for sure, sir," said Holovik. "I knew that there were . . . ah . . . weapons, new ones. We don't get information the way we used to during the war—"

"Stop mumbling, man! If that's a secret weapon, it isn't from *Delta.*"

Belter put in. "It isn't from *Epsilon* either. I went over the specs of everything aboard all of these vessels."

"Then where did—Oh!" His "Oh" was echoed by Belter and two junior officers who had overheard the conversation. It was a most respectful sound. Also respectful was the unconscious retreat all hands took to the inboard bulkhead.

Hereford, who had not spoken a word for nearly a day, asked: "What's the matter? What is it?"

"Don't know," breathed Belter, "but I'd like to see it out of here. Way out. It's the Invader's."

"G-get it out of here. *Jump!*"

They piled into the inboard section and sealed the cargo inspection hatch behind them, leaving three spacesuited e. m. and an officer to worry the object tenderly out of the port.

"You're a cretin," Osgood told the captain. "You're a drooling incompetent. Whatever possessed you to bring in an unidentified object?"

"I . . . it was . . . I didn't know," stammered Holovik. Belter marveled at the degree of worriment the man's face could register.

A junior officer with communication pips spoke up. "That was the object which didn't register on the detectors until it was within a mile, sir," he reminded. "I still can't understand it, commander. Our detectors—all of 'em—are sensitive up to fifty thousand at the very least. I'm ready to swear our equipment was in order, and yet we had no sign of this thing until it was right on top of us."

"Somebody in Detection asleep," growled the Butcher.

"Wait, commander," Belter turned toward the young sigman. "How was this thing bearing?"

"Right on the ship, sir. An intersection course from down left forrad, as

I remember. We deflected it and then brought it about with the short tractors."

"It just appeared out of nowhere, eh?" rasped Osgood. "And so you invited it in."

"There was a good deal of débris in that sector, commander," said Holovik faintly. "We were busy . . . tracers sometimes give resultant indications when they pick up two separated objects simultaneously—"

"Yeah, and then they indicate something where nothing is. They *don't* indicate nothing where there is something. Why, I'll break you to—"

"It seems to me," said Belter, who had been pursuing his own line of reasoning, "that what we have here is mighty similar to what hit Outpost. Remember? They put a tracer on it as they saw it leave the Invader. It blanked out. They got no radiation or radar reflection at all. But it came in and wiped out the base."

"The nonexistent, hypothetical 'warper,'" said Hereford, with a wisp of his old smile.

Osgood glanced at him coldly. "If you're trying to tell me that the Invader used a warper to protect himself from The Death, you're showing your ignorance. The Death is a vibration, *not* a radiation. It's a physical effect, not an energy phenomenon."

"Blast The Death!" spat Belter. "Don't you see what we've got here? It's one of their disrupters. Short range — always short range. Don't you see? It *is* a warper, and for some reason it can only carry a limited amount of power. The Invader started popping away at *Delta*, and when she fought back, he let loose with everything he had. This must've been one of his disrupters which was launched while *Delta* was in one piece and arrived after she'd been blasted. Then it went right on, seeking, but ran out of fuel before it reached *Sigma*. That's why it suddenly appeared to the detectors."

"Now, that makes sense," said the Butcher, looking at Belter as if he were seeing him for the first time. He creased his lower lip sharply with his thumb and forefinger. "Warp camouflage, eh? H-m-m-m. I wonder if we could get a look at that unit. Maybe we could build something like it and get close enough to that devil to do some good." He turned to the fretful Holovik. "Captain? See if you can get a couple of techs to volunteer to de-fuse that thing. If you can't get volunteers—"

"I'll get them, sir," said Holovik, for the first time looking a little happier. It made him appear wistful instead of mournful.

It was easier to count those not volunteering, once the proposition went out over the intercom. In a few minutes *Sigma* lay off a couple of hundred miles to stand by while a crack squad worked over the drifting bomb. They carried three viewers, and the control bridge of the Death ship was mobbed with experts. Every move was carefully discussed; every possibility was carefully explored before a move was made.

They did it. It was slow, and suspense reached an agonized pitch; but once it was done and could be reviewed, it was unbelievably simple. The warhead was clamped to the main hull of the bomb. The activators were in the head, controlled simply by a couple of rods. The seeking gear, proximity circuits, power source, drive, and what was apparently the camouflage unit were all packed into the hull.

A torch was clamped to the warhead, which was cast adrift. The precious hull was towed a few miles with reaction-pistols and picked up by the ship, which then got clear and rayed the virulent little warhead into shocking, flaring extinction.

In shops and laboratories throughtout the System, feverish work was carried on over plans and mock-ups of the alien weapon. One of the first things discovered about it was that the highly theoretical and very popular term "warper" was a misnomer. The camouflage was an ingenious complexity of wiring in concentric "skins" in the hull. Each impinging radiation caused the dielectric constant of the hull to change so that it re-radiated that exact frequency, at the same intensity as received, but a hundred and eighty degrees out of phase. The heart of the device was what might have been the thousandth generation descended from a TR tube. It hunted so constantly, and triggered radiations with so little lag, that the device could handle several frequencies almost simultaneously.

What used most of the power was the drive. It involved a magnetic generator and a coil which carried magnetic flux. Induced in this was an extremely intense gravitic field, self-canceling forward and on all sides. The intensified "reverse" gravity pressure was, therefore, at the stern. Maneuvering was accomplished by variations in field strength by inductance-coupling of the mag-flux coils.

The hull was a totally absorbent black, and the missile was made of an alloy which was transparent to hard radiation.

All information was pooled, and sub-projects were constantly assigned from Science Center. Etherfac transmission was full of last-minute reports on phases of the problem, interspersed with frequent communiqués on the last known position of the Invader. He had indulged in an apparently aimless series of convolutions for several weeks following D-Day, evidently to assess his damage. After that he had maintained a great circular course, parallel in plane to the Solar ecliptic, and the assumption was that he was undergoing repairs and engaging in reconnaissance. Both were certainly indicated, for he must have undergone an incredible strain in that wild curve on D-Day. And as before, he was the symbol of terror. If he struck where would he strike? If not, he would leave. Then, would he be back? Alone, or with a fleet?

Belter's life was a continuous flurry of detail, but he found time to wonder about several things. The Jovians, for example. They had been a great help in the duplication of the camouflage device, particularly in their modification of the fission power plant it carried. The Jovian improvement was a disruption motor using boron, an element which appeared nowhere in the original. It gave vastly more range to the Solarian device. And yet—there was something about the Jovian willingness that was not quite in harmony with their established behaviour patterns. The slight which Leess had suffered from the Martian was not, after all, a large thing in itself, but the fact that Leess had led his planet into a policy of non-co-operation made it large. The sudden reversal of this policy since D-Day was more than puzzling. A hundred times Belter shrugged the question off, grunting "Jovians are funny people," and a hundred times it returned to him.

There was another unprecedented worry. The Martians delegate called Belter aside one afternoon and presented it to him. "It's that Hereford," the man said, scratching his sunburned neck. "He's too quiet. I know he lost a mess of 'face' over his vote on The Death, but he still has his following. More than I like to think about.

"So?"

"Well, when the big day comes, when we send a formation of the new camouflaged boats out there, what's to keep him from opening his trap and making trouble for us?"

"Why should he?"

"You know what the pacifists are after. If we fitted out a bunch of these new gadgets with disrupters and wiped the Invader out, they'd have no kick. They don't want that Death-defense to get back to the System. You know that."

"H-m-m-m. And how would you handle this on Mars?"

The Martian grinned. "Why, I reckon Brother Hereford would have a little accident. Enough to keep him quiet, anyhow—maybe for a little while, maybe for—"

"I thought as much." Belter let himself burn for a luxurious second before replying. "Forget it. Supposing what you say is true—and I don't grant that it is—what else can you think of?"

"Well, now, I think it would be a bright idea to send a camouflage force out without consulting the Council. That way, if Hereford is waiting for the psychological moment to blow his mouth off, we'll get what we're after before he knows what's happening. *If* we can keep the lid on it, that is."

Belter shook his head. "Sorry, friend. No can do. We can stretch a point of security and take a military action without informing the people, but there's no loophole in the charter which will let any of us take military action with the knowledge of the Council. Sorry. Anyway, thanks for the tip."

This, like the Jovian matter, was a thing he shrugged off and forgot—five or six times a day. He knew the case-hardened character which lived behind Hereford's dignified mien, and he respected it for what it was and for what it could do.

There was a solution to these problems.

He laughed when it occurred to him, smiled when it recurred; but he frowned when he realized that he had already decided. He must have, for he found himself slipping Addison's report into a private drawer of his desk. Addison was the Tech in charge of the local camouflage project. It was top secret and had been delivered, sealed, by an orderly. It invited him to inspect a two-place craft which had been finished and tested, fueled and equipped. The report should have gone to the Agenda.

He called Hereford, and when they were alone he asked, without preliminary, "Are you interested in heading off a war?"

"A rhetorical question, certainly."

"Nope. Question two. Have you anything special to do the next few weeks?"

"Why I—nothing out of the ordinary," said Hereford, sadly. Since his historic "Exception" speech, he had had little enough to do.

"Well, clear your social calendar, then. No, I'm not kidding. This is hot. How soon can you be ready for a little trip?"

Hereford studied him. "In about thirty minutes. I can tell by the way you act that you'd want it that soon."

"You're psychic. Right here, then, in thirty minutes."

Within two hours they were in space, aboard a swift scoutship. Behind him Belter left a bewildered deputy-chairman with a brief authorization in his hands, and an equally astonished Master-Tech, both of whom were sworn to silence. In the scoutship were a sworn-in crew and the black hulk of the camouflaged lifeboat.

For the first two days out, he left Hereford to twiddle his thumbs in the cramped recreation room of the ship, while he closeted himself with the skipper to work out an approach course. It took him half of the first day to convince the young man that he was in his right mind and that he wanted to board the Invader —two facts that had been regarded, during the past three years, as mutual incompatibilities.

The approach was plotted to permit the boat to overtake the Invader using a minimum of power. The little craft was to be launched from the scout at high speed on a course which would put it in elliptical orbit in respect to the sun. This ellipse was at right angles to the plane of the circular course the Invader had been maintaining for the past few weeks. The ellipse intersected this circle in two places, and the launching time was set to synchronize these points of intersection with the predicted position of the Invader on its own course. The big *if*, naturally, was whether or not the Invader would maintain course and speed. He might. He had, twice before, once for nine months and once for over a year. If Belter watched his tables, and spent enough time with his tetrant and calculex, it would require only an occasional nudge of power to follow his course, or to correct it for any variations of the Invader's predicted position.

After the matter was settled, and he had slept, he rejoined Hereford. The old man was apparently staring right through the open book on his knee, for his eyes were wide and unmoving. Belter slumped down beside him and expelled an expressive breath. "What a way to make a living!"

Amusement quirked the corners of Hereford's mouth. "What?"

"Finding tough ways to die," grinned the chairman. "I'm ready to tell you about this thing, if you want me to."

Hereford closed his book and put it by.

"It's the Jovians, first of all," said Belter, without preliminary. "Those critters think so well, so fast, and so differently that it scares me. It's tough . . . no, it's downright foolish to try to judge their actions on a human basis. However, they pulled one stunt that was so very human that it completely escaped me. If Mars had tried it, I'd have been on to it instantly. It's taken a long time for it to percolate, since it concerns the Jovians. Do you remember how ready they were to help out after D-Day? Why do you suppose that was?"

"I would judge," said Hereford thoughtfully, "that they had awakened to their responsibility as members of the System. The Invader had a defense against the ultimate weapon, the emergency was intensified, and they pitched in to help for the common good."

"That's what I thought, too. Has it occurred to you at all what would probably happen if Jupiter—and only Jupiter —had a defense against The Death."

"Why, I don't think they would—"

Belter broke in roughly, "Never mind what you would like to believe. What would happen?"

"I see what you mean," said Hereford. His face was white. "We came up from almost certain defeat and won the war when we developed The Death. If Jupiter had a defense, we would be no match for them."

"That's way understated," said Belter.

"But . . . but they signed a peace treaty! They're disarming! They won't break their word!" cried Hereford.

"Of course they won't! If they get their hands on that defense, they'll calmly announce the fact, give us time to prepare, even, and then declare war and wipe us out. There's a great deal of pride involved, of course. I'll venture to say that they'd even help us arm if we'd let them, to make the struggle equal to begin with. They're bugs for that kind of fairness. But the whole System knows that machine for machine, unit for unit, Jovian for man, there is no equality. They're too much for us. It is only our crazy, ingrained ability to manufacture suicidal weapons which gives us the

upper hand. The Jovians are too wise to try to conquer a race which insists on introducing murder-machines without any due regard for their future significance. Remember what Leess said when the Martian insulted him? 'Earth dead, Jupiter dead, Mars dead. Good.' They know that unless we as a race are let alone, we will certainly find a way to kill off our neighbors, because as a race we don't care if we get killed in the process."

Hereford shuddered. "I'd hate to think you were right. It makes Peace Amalgamated look so very useless, for all its billions of members."

Belter cracked his knuckles. "I'm not trying to tell you that humans are basically rotten, or that they are fated to be what they always have been. Humanity has come very close to extinction at least four times that I know of, through some such kind of mass suicide. But the existence of Peace Amalgamated does indicate that it believes there is a way out, although I can't help thinking that it'll be a long haul to get us 'cured.' "

"Thank you," said Hereford sincerely. "Sometimes I think you might be a more effective peace worker than I can ever hope to be. Tell me—what made you suspect that the Jovians might be after the defense device for themselves?"

"A very recent development. You must know that the one thing which makes our use of the camouflage unit practicable is the new power plant. With it we can run up to the Invader and get inside his detectors, starting from far out of his range. Now, that was a Jovian design. They built it, ergo they had it first.

"In other words, between the time of its invention and the time they turned it over to us, they had the edge on us. That being the case, there would be only one reason why, in their supreme self-confidence, they would turn it over to us; namely, they didn't need that edge any more!"

"It fits," said Hereford sorrowfully.

"Good. Now, knowing Jovians—and learning more every day, by the way—I conclude that they gave us the drive, not because they had something better, but because it had already served its purpose for them. I am convinced that Jovian camouflage boats are on the way to the Invader now—and perhaps they have even . . . but I'd rather not think about that." He spread his arms, dropped them. "Hence our little jaunt. We've got to get there first. If we're not first, we have to do what we can when we get there."

The boat, lightless, undriven, drifted toward the Invader. At this arc of the chosen ellipse, its velocity was low, and suspense was as ubiquitous a thing as the susurrus of the camouflage unit which whispered away back aft. Hereford and Belter found themselves talking in whispers too, as if their tense voices could carry through those insulated bulkheads, across the dim void to the mysterious crew of the metal murderer which hung before them.

"We're well inside his meteor deflectors," gritted Belter. "I don't know what to think. Are we really going to be able to get to him, or is he playing with us?"

"He doesn't play," said Hereford grimly. "You will excuse the layman's question, but I don't understand how there can be a possibility of his having no detector for just this kind of approach. Since he uses bombs camouflaged the way we are, he must have some defense against them."

"His defense seems to be in the range of his deflectors," answered the chairman. "Those bombs were hunters. That is, they followed the target wherever it moved. The defense would be to stall off the bomb by maneuvering until it ran out of fuel, like the one we picked up. Then his meteor-repellers would take care of it."

"It was obviously the most effective weapon in his arsenal," said Hereford hopefully.

"As far as we know," said Belter from the other end of the emotional spectrum. Then, "I can't stand this. I'm going to try a little drive. I feel as if we'd been hanging here since nuclear power was discovered."

Hereford tensed, then nodded in the dark. The boat was hardly the last word in comfort. The two men could lie prone, or get up to a cramped all-four position. Sitting was possible if the cheekbones were kept between the knees and the occipital bones tight against the overhead. They had been in that prison for more days than they cared to recall.

Belter palmed the drive control and moved it forward. There was no additional sound from the power unit, but the slight accelerative surge was distinctly felt.

"I'm going to circle him. No point in being too careful. If he hasn't taken a

crack at us by this time, I don't think he's going to." He took the steering lever in his other hand and the boat's nose pulled "up" in relation to the Invader's keel-plane. There was no fear of momentum-damage; the controls would not respond to anything greater than a 5-G turn without a special adjustment.

Within four hours the craft was "over" the alien. The ugly, blind-looking shape, portless and jetless, was infuriating. It went its way completely unheeding, completely confident. Belter had a mad flashback to a childish romance. She hadn't been a very pretty girl, but to have her near him drove him nearly insane. It was because of her perfect poise, her mask. He did not want her. He wanted only to break that calm, to smash his way into the citadel of her *savoir faire*. He had felt like that, and she was not evil. This ship, now—it was completely so. There was something unalive, implacable, inescapable about this great murderous vessel.

Something clutched his arm. He started violently, bumped his head on the overhead, his hand closing on the velocity control. The craft checked itself and he bumped his head again on the forward port. He swore more violently than Hereford's grip on his arm called for, and said in irritation: "What?"

"A—hole. A hatch or something. Look."

It was a black shadow on the curve of the gray-shadowed hull. "Yes . . . yes. Shall we—" Belter swallowed and tried again. "Shall we walk into his parlor?"

"Yes. Ah . . . Belter—"

"Hm-m-m?"

"Before we do—you might as well tell me. Why did you want me to come?"

"Because you're a fighting man."

"That's an odd joke."

"It is not. You have had to fight every inch of the way, Hereford."

"Perhaps so. But don't tell me you brought me along for the potential use of my misled pugnacities."

"Not *for* them, friend. Because of them. You want the Invader destroyed, for the good of the System. I want it saved, for the good of the System as I see it. You could achieve your end in one of two ways. You could do it through Peace Amalgamated, back at Central. It would only need a few words to obstruct this whole program. *Or*, you could achieve it yourself, here. I brought you to keep you from speaking to Peace Amalgamated. I think having you here where I can watch you is less of a risk to the procurement of the Death defense."

"You're a calculating devil," said Hereford, his voice registering something between anger and admiration. "And suppose I try to destroy the ship—given, of course, the chance?"

"I'd kill you first," said Belter with utter sincerity.

"Has it occurred to you that I might try the same thing, with the same amount of conviction?"

"It has," Belter replied promptly. "Only you wouldn't do it. You could not be driven to killing. Hereford, you pick the oddest times to indulge in dialectics."

"Not at all," said Hereford good-humoredly. "One likes to know where one stands."

Belter gave himself over to his controls. In the back of his mind was a whirling ball of panic. Suppose the power plant should fail, for example. Or suppose the Invader should send out a questing beam of a frequency which the camouflage unit could not handle. How about the meteor deflector? Would they be crushed if the ship located them and hurled them away with a repeller? He thought with sudden horror of the close-set wiring in the boat. Shorts do happen, and sometimes oxidation and vibration play strange tricks with wiring. *Do something*, his inner voice shouted. *Right or wrong, do something.*

They drifted up to the great silver hull, and the hole seemed to open hungrily to them as they neared it. Belter all but stopped the craft in relation to the ship, and nosed it forward with a view to entering the hatch without touching the sides.

"In the visirecord, didn't the camouflage disrupter at Outpost show up for a moment on the screen as it left the ship?" Hereford whispered.

"Yeah. So what? Oh! You mean the cam unit was shut off until the bomb was clear of the ship. You have something there, Hereford. Maybe we'd better shut it off before we go in. I can see where it would act like something less than camouflage, enclosed in a metal chamber and re-radiating all the stray stuff in there plus the reflection of its own output." He put his hand out to the camouflage control. "But I'm going to wait until we're practically inside. I don't relish the idea of being flung off like a meteorite."

Handling the controls with infinite

care, touching them briefly and swiftly with his fingertips, Belter tooled the boat through the hatch. He switched off the camouflage effect and had the boat fully inboard of the Invader before he realized he was biting his tongue.

Surprisingly, the chamber they entered was illuminated. The light was dim, shadowless, and a sickly green. The overhead and bulkheads themselves, or a coating on them, accounted for the light. There was a large rack on the forward partition containing row on row of the disruption bombs, minus their warheads. Above each ended a monorail device which ran to a track ending in a solid-looking square door — obviously the storage space for the warheads. Another hoist and monorail system connected the hulls themselves with the open hatch. This trackage, and the fact that the chamber was otherwise untenanted, indicated that the bomb assembly, fuse-setting, and dispatching were completely automatic.

"Camouflage again," gritted Belter. "This boat is enough like those bombs to fit sort of cozily in one of those racks. In this crazy light no one would notice it."

"This light is probably not crazy to those on board," said Hereford.

"We'll worry about that later. Slip into your suit."

From the after locker they drew the light pressure suits around themselves and secured them. Belter demonstrated the few controls — oxygen, humidity, temperature, magnetism, and gravity, to be quite sure the old man was familiar with them all. "And this is the radio. I think it will be safe to use the receivers. But don't transmit unless it's absolutely necessary. If we stick close together we can talk by conduction—touching our helmets."

It was the work of only a few minutes to grapple the weightless craft into the rack. It was a fair fit. When they had finished, Belter reached into and took out two blasters. He secured the escape hatch and turned to Hereford, handing him one of the guns. Hereford took it, but leaned forward to touch his transparent helmet to Belter's. His voice came through hollowly but clearly.

"What's this for?"

"Morale," said Belter briefly. "You don't have to use it. If we're watched, 'Two armed men' sounds better than 'Two men, one armed.'"

The groped to the inboard partition and followed it cautiously aft. The touch of the metal under his gloves brought a shocking realization to Belter of where he actually was, and for a moment his knees threatened to give way. Deep inside him, his objective self watched, shaking its figment of a head in amazement. Because he had secured a lifeboat equipped for the job, he had come. Because he had gotten inside the Invader's screens, he had approached the ship itself. Because he was close enough and a hatch was open, he had come in. *Just the way I got into the Army, and the way I got into politics,* he grinned.

They found a ladder. It led upward through a diamond-shaped opening in the overhead. The rungs were welded to the bulkhead. They were too narrow and too close together. There were dragging scuffmarks on each side, about eighteen or twenty centimeters on each side of the rungs. What manner of creature ambulated on its centerline, dragging its sides?

A Jovian.

He looked at Hereford, who was pointing at the marks, so he knew that Hereford understood, too. He shrugged and pointed upward, beckoning. They went up, Belter leading.

The found themselves in a corridor, too low to allow them to stand upright. It was triangular in cross-section, with the point down and widened to a narrow catwalk. A wear-plate was set on into each side and bore the same smooth scuffs. The deck, what there was of it between the sharply sloping sides, was composed of transverse rods. A creature which could grip with claws and steady itself with the sides of a carapace could move quite freely in such a corridor regardless of gravitic or accelerative effects, within reason.

"*Damn!*"

Belter jumped as if stabbed. Hereford tottered on his magnagrips and clutched at the slanted bulkhead for support. The single syllable had roared at them from inside their helmets. The effect was such that Belter all but swallowed his tongue. He pointed at himself in the dim green light and shook his head. Hereford weakly followed suit. Neither of them had spoken.

"*Lousy Jovians—*"

Belter, following a sudden hunch, laid his hand on Hereford's shoulder to suggest that he stay put, and crept back to the bomb bay opening. He lay down, and cautiously put his head over the lip.

A long, impossibly black *something* was edging across the deck down there. Belter squeezed his eyes tightly closed and opened them wide, trying to see through the foggy green radiance. At last he discerned a small figure pulling and hauling at the shadow, the bomb, the . . . the lifeboat.

A human figure. A man. A man who must have come through the Invader's defenses, even as he had. A man with a camouflaged boat.

But no one except a few Techs even knew that the boats had been completed. And the Council, of course.

The man below reached inside his boat and touched a control. It sank down to the deck next to the bomb rack as its magnetic anchors were activated. The man shut the escape hatch and shuffled toward the inboard partition, his blaster in hand, his head turning as he came.

Belter watched him until he discovered the ladder. Then he scrambled to his feet and, as fast as the peculiar footing would allow him, he scurried back to Hereford. His helmet receiver registered an angry gust of breath as the man below saw the short-spaced ladder and the scuffmarks.

Belter slammed his helmet against Hereford's. "It's a Martian," he gritted. "You might know it'd be a blasted Martian. Only a Martian'd be stupid enough to try to climb aboard this wagon."

He saw Hereford's eyebrows go up at this, but the peace-man did not make the obvious comment. He was silent as he followed Belter forward to the nearest turn in the corridor. They slipped around it, Belter conning its extension carefully. There was still, incredibly, no sign of life.

Just around the turn there was a triangular door, set flush into the slanted wall. Belter hesitated, then pressed it. It did not yield. He scrabbled frantically over its surface, found no control of any kind. Hereford grasped his arm, checked him, and when Belter stepped back, the old man went to his knees and began feeling around on the catwalk floor. The door slid silently back.

Belter slipped in, glanced around. But for a huddled, unmoving mass of some tattered matter in the corridor, there was nothing in the room, which was small. Belter waved the old man in. Hereford hopped over the sill, felt on the floor again, and the panel slid shut.

"How did you know how to open that door?" he asked when their helmets touched.

"Their feet . . . claws . . what-have-you . . . are obviously prehensile, or they wouldn't have floors that are nothing more than close-set rungs. Obviously their door handles would be in the floor."

Belter shook his head admiringly. "See what happens when a man thinks for a living?" He turned to the door, set his head against it. Very faintly, he could hear the cautious steps of the Martian. He turned back to Hereford. "I suppose I ought to go out there and pin his ears back. Martians have nothing in their heads but muscles. He'll walk right up to the skipper of this ship if he has to wade through the crew to do it. But I'm mighty interested in just what he's up to. We couldn't be much worse off than we are. Do you suppose we could follow him close enough to keep him out of trouble?"

"There is no need for caution," said Hereford, and his voice, distorted by the helmets, was like a distant tolling bell.

"What do you mean?"

Hereford pointed to the huddled mass in the corner. Belter crossed to it, knelt, and put out a hand. Frozen substance crumbled under his touch in a way which was familiar to him. He shrank back in horror.

"It's—dead," he whispered.

Hereford touched helmets, "What?"

"It's dead," said Belter dully. "It's—homogenized, and frozen."

"I know. Remember the three Jovian capital ships?"

"They couldn't stand The Death," Belter murmured. "They opened all the locks."

He stood up. "Let's go get that fool of a Martian."

They left the room and followed the corridor to its end. There was another ladder there. They climbed it, and at the top Belter paused. "I think we'd better try for the control central. That'll be the first thing he'll go after."

They found it, eventually, before the Martian did, possibly because they were not being as cautious. They must have passed him en route, but such was the maze of corridors and connecting rooms that that was not surprising. They still eschewed the use of their transmitters, since Belter preferred to find out exactly what the Martian was up to.

They had just opened a sliding door at the end of a passageway, and Belter was half through it when he stopped so suddenly that Hereford collided with him.

The room which spread before them

was unexpectedly large. The bulkheads were studded with diamond-shaped indicators, and above them and over the ceiling were softly colored murals. They glowed and shimmered, and since they were the first departure from the ubiquitous dim green, their immediate effect was shocking.

In the center of the chamber was a pair of control desks, a V pointing forward and a V pointing aft, forming another of the repeated diamond forms. There was passage space, however, between the two V's. In the enclosure was a creature, crouching over the controls.

It was alive.

It stirred, heaving itself up off the raised portion of the deck on which it lay. It was completely enclosed in a transparent, obviously pressurized garment. As it rose, Belter and Hereford shrank back out of sight. Belter drew his blaster.

But the creature was apparently not aware of them. It turned slowly to face the opposite corner of the room, and the sensory organ on its cephalothorax blushed pink.

There was a bold clanking from the corner of the room, which Belter felt through his shoes. Then the wall began to glow. A small section of it shone red which paled into white. It bellied momentarily, and then sagged molten. The Martian, blaster in hand, leapt through the opening. *And he could have opened that door,* thought Belter disgustedly. *Why does a Martian always have to do it the hard way?*

The Martian stopped dead when he was clear of the simmering entrance. He visibly recoiled from the sudden apparition of colour, and stood awed before those magnificent murals. His gaze dropped to the center of the room.

"So there is a defense," he snarled. His transmitter was till blatantly operating. "Come on, Jupiter. I was wise to this whole stunt. Who did you think you fooled by poisoning your own forces on Titan? Invader, huh? Some stuff! Get out of there. Move, now! I know you can understand me. I want to see that Death defense and the controls. And there's no sense trying to call your buddies. I've seen them all over the ship. All dead. Something saved you, and I mean to find out what it is."

He raised his blaster. The Jovian quivered. Belter crossed his left arm across his body and grasped the edge of the door. He rested his blaster across his left forearm and squinted down the barrel. Hereford reached over his shoulder and drew the muzzle upward.

Belter turned furiously to him, but the old man shook his head and, astonishingly, smiled. His hand went to his belt. He threw his transmitter switch and said in his deep, quiet voice:

"Drop that blaster, son."

The effect on the Martian was absolutely devastating. He went rod stiff, dropping his weapon so quickly that he all but threw it. Then he staggered backward, and they could hear his frightened gasping as he tried to regain his breath.

Belter strode out into the room and backed to the left bulkhead, stopping where he could cover both the Martian and the Jovian. Hereford shuffled over and picked up the blaster.

"P-peace Amalgamated!" puffed the Martian. "What in time are *you* doing here?"

Belter answered. "Keeping you from using your muscles instead of your brains. What do you think you're doing?"

"Recon," said the Martian sullenly.

"For who?"

"What do you think?"

"I think you're doing it for Mars," said Belter bluntly. "It would be just dandy if Mars had the Death defense now, wouldn't it? You guys have been chafing at the bit for a long time."

"We're not crazy," flashed the Martian. "We never did make peace with Jupiter, remember? We knew better. And now look." He gestured at the Jovian. "What a pretty way to knock slices out of all the Solarian defenses. Just play Invader for a few years and scare the bedizens out of humanity. Wipe out what looks tough, and take advantage of the panic. Heh! Treaties with Jupiter! Why in blazes didn't you exterminate them when you had the chance? Now, if Mars gets the Defense, we'll handle the thing right. And maybe when the smoke clears away we'll be magnanimous enough to let Earth and the Colonies work for us."

"All blast and brawn," marveled Belter. "The famous Martian mouth."

"Don't you brag about brains. I know for a fact that our councilman tipped off that camouflage boats were being made in secret. If you didn't act on it, it's your hard luck."

"In a way he did," said Belter. "Enough, I imagine, to keep his little conscience clear. I'm here, for all that."

"Not for long," snapped the Martian, making a long sliding step.

"Look out, Hereford!"

Belter snapped a fine-focus shot at the Martian but he was late. The Martian was behind Hereford, grappling for the blaster which the Peace delegate still held in his hand. Hereford tried to spin away but was unsure of his footing in the gravitic shoes and succeeded only in floundering. The Martian suddenly shifted his attack to the blaster at Hereford's hip. He got it and danced clear. "I know the pantywaist won't shoot," he said, and laughed. "So it's you first, Belter, and then old 'Peace-in-our-Time.' Then I'll get the Death defense with or without the aid of the spider yonder."

He swung the weapon on Belter, and the chairman knew that this was it. He closed his eyes. The blaster-flash beat on the lids. He felt nothing. He tried to open his eyes again and was astounded to discover that he could. He stood there staring at Hereford, who had just shot the Martian through the head. The man's magnagrips held him upright as the air in his suit whiffed out, to hang in a mist like a frozen soul over his tattered head.

"I killed him, didn't I?" asked Hereford plaintively.

"To keep the peace," said Belter in a shaking voice. He skated over to the old man and took the blaster, which was still held stiffly out toward the dead man. "Killing's a comparative crime, Hereford. You've saved lives."

He went to the control table and put his hands on it, steadying himself against the broken sounds Hereford was making. He stared across the table at the great jelly-and-bone mass that was a Jovian. He would have given a lot for a translator, but such a machine had never yet been made portable.

"You, Jovian. Will you communicate? Spread that membrane for 'yes.' Contract it for 'no.'"

Yes. The creature was perfectly telepathic, but with humans it had to be one way. A translator could convert its emanations into minute electronic impulses and arrange them into idea-patterns for which words were selected.

"Is there anything on this ship which can resist The Death?"

Yes.

"You understand it?"

Yes.

"Will you share your knowledge with the Council?"

Yes.

"Can you de-activate all automatics on this ship?"

In answer the Jovian extended one of its fourth pseudoclaws, and placed it next to a control on the table. It was a small square housing, set so as to repeat the diamond motif. An orange pilot light glowed in its center, and next to it was a toggle. On the forward side of the toggle was an extremely simple symbol —two dots connected by two lines, each two-thirds of the distance between the dots, so that for the middle third they lay parallel, contiguous. On the after side of the toggle, the symbol differed. The dots were the same, but the lines were separated. It was obviously an indication of "open" and "closed" positions. The toggle slanted forward. Belter put his hand on it, looked at the Jovian.

The membrane spread affirmatively. Jovians did not lie. He pulled the toggle back and the pilot went out.

"This General Assembly has been called," Belter said quietly into the mike, "to clear up, once and for all, the matter of the Invader and the contingent wild and conflicting rumors about a defense against The Death, about interstellar drives, about potential war between members of the Solar Federation, and a number of other fantasies." He spoke carefully, conscious of the transmission of his voice and image to government gatherings on all the worlds, in all the domes, and on ships.

"You know the story of my arrival, with Hereford, aboard the Invader, and the later arrival of the Martian, and his" —Belter cleared his throat—"his accidental death. Let me make it clear right now that there is no evidence that this man was representing the Martian General Government or any part of it. We have concluded that he was acting as an individual, probably because of what might be termed an excess of patriotism.

"Now, as to the presence of the Jovian on the ship—that is a perfectly understandable episode. Jupiter is a defeated nation. I venture to say that any group of us in the same situation would commit acts similar to that of this Jovian. I can say here, too, that there is no evidence of its representing any part of the Jovian Government. What it might have done with, say, a Death defense had it found one aboard is conjecture, and need not enter into this discussion.

"I have before me a transcript of this Jovian's statement. You may rest assured that all facts have been checked; that fatigue and crystalline tests and examinations have been made of metallic samples taken from the vessel; that the half-lives of radioactive by-products in certain

fission and disruption machinery have been checked and substantiate this statement. This is the transcript:

"'For reasons consistent with Jovian philosophy, I took a Jovian-built camouflaged boat and departed with it before the improved drive had been submitted to the Joint Solar Military Council. I approached the Invader cautiously and found the camouflage successful. I boarded him. I put my boat in the Invader's bomb rack, where it was well hidden in plain sight, being the same size and general shape as the Invader's bombs. I went inboard, expecting a great deal of trouble. There was none. Every port and hatch was open to space except the warhead storage, which was naturally no hiding place due to radioactivity. I proceeded to the control chamber. I found the master control to all the ship's armament.

"'But my most important discovery was a thought record. The Invaders were, like Jovians, of an arthropodal type, and their image patterns were quite understandable after a little concentration. I shall quote from that record:

"'*We are of Sygon, greater of the two planets of Sykor, a star in Symak. The smaller planet, known to us as Gith, is peopled by a mad race, a mistake of nature—a race which fights and kills itself and wars on its neighbors; a race which aspires to conquer purely for the sake of conquest, which hunts for hunting's sake and kills for pleasure. While it progresses, while it co-operates, it bites itself and fights itself and is never done with its viciousness.*

"'*Its planet was large enough to support it, but it was not satisfied. Sygon was no place for these vicious animals, for they had to bring their atmosphere in bubbles for breathing, and Sygon's mass crushed them and made them sicken. Not needing Sygon, still they were willing to fight us for it.*

"'*We killed them by the hundreds of thousands, and still they kept coming. They devised incredible weapons to use against us, and we improved on them and hurled them back. They improved on these, completely ignoring the inevitability of their end.*

"'*The ultimate weapon was theirs—a terrible thing which emulsified the very cells of our bodies, and there was no defense against it. The first time it was used it killed off most of our race. The rest of us threw all our resources into this, the Eternal Vengeance—this ship. It is designed to attack anything which radiates, as long as the radiations exhibit the characteristics of those produced by intelligent life. It will stay in Sykor's system, and it will attack anything which might be Gith or of Gith. Gith will strike back with its terrible weapon, and all of us on the ship will die. But the ship will go on. Gith will loose its horror and agony on Sygon, and our race will be dead. But the ship will go on. It will attack and attack, and ultimately it will destroy Gith.*

"'*And if Gith should die and be born again, and evolve a new race, and if that race shall reach a stage of culture approaching that of its cursed forebears, the ship will attack again until it has destroyed them. It will attack all the more powerfully for having rested, for between attacks it will circle Sykor, drinking and storing its energy.*

"'*Perhaps there will come a time when Sykor will cool, or flare up and explode, or become subject to the influence of a wandering star. Perhaps then the ship will cease to be, but it is possible that it will go wandering off into the dark, never to be active again. But if it should wander into a similar system to that which bore it, then it will bring death and horror to that system's inhabitants. If this should be, it will be unjust; but it will be only an extension of the illimitable evil of Gith.*'"

Belter raised his head. "That is what we were up against. What passed in that Jovian's mind when we burst in on it, with our quarreling and our blasters and our death-dealing, I can only imagine. It made no move to harm us, though it was armed. I think that it may have been leaving us to the same inevitable end which overcame Gith. Apparently a Jovian is capable of thinking beyond immediate advantage.

"I have one more thing to tell you. According to star-photographs found in a huge file on the Invader, and the tests and examinations I mentioned, the Invader is slightly over fourteen million years old.

"There is a defense against The Death. You can't kill a dead man. Now, in more ways than one, I give you over to Hereford."

NEW LIVES FOR OLD

By WILLIAM BADE

The process made a man young again—but it couldn't be used on old men. And it totally destroyed all knowledge and memory. And still it was very valuable indeed!

"O.K.," Kruse said, mark your seat numbers on your class tickets and bring them up here to me."

Soon there was a line of sophomore college students, both men and women, passing by his desk, each handing him a class ticket and telling him how the name should be pronounced. "Mary Bates . . . Joseph Howard . . . Robert Chadwick . . . John Logan. . . ."*John Logan!* Kruse went white and jerked his head up to stare at the erect back of the boy walking down the aisle, and then at the face as he turned and sat down. The boy looked back at him and began to frown perplexedly as he noticed Kruse's attention.

Kruse grew aware of his situation and abstractedly accepted a class card from the girl who was next in the line. Gradually he regained control of himself. But still with half his mind he was thinking of this extraordinary occurrence.. He had never expected that they would meet! Let's see; the boy must be . . . oh . . . nineteen, by now. Nineteen! A grown young man! A grown *son!*

With an effort he forced himself to concentrate on the business at hand. "Louise Stebbins . . . Harold Jakobson . . . Mary Lou Washburn. . . ."

When he had added the last card to his pile and the last student had gone back to his seat, Kruse sat there for a moment, trying to organize his thoughts. Before him, on a card. were notes for the brief first lecture he had intended to give. Could he—? Yes!

He cleared his throat. "In this course," he said, "we will study the basic psychological theory of education. Education, that is, taken in a broad sense, including the processes by which preschool-age children and also adults learn. Until thirty or forty years ago—"

Ten minutes later he concluded: "The book we will use is 'The Psychologics of Learning: An Introductory Text,' by Howard Strong and Alexander Dimitroff." He wrote the title on the blackboard, then turned and said: "Your first assignment is to read the Introduction and Chapter One. That's all for today."

He sat down and watched the class leave the room. With an effort he refrained from staring at his son, whom he could not remember seeing before this day. The identification was almost certain, however, involving not only the name but a definite facial similarity to himself. "Not a bad-looking youngster at all," he thought with considerable satisfaction.

The train of circumstances leading to this situation had begun about fifteen years before, in a pleasant little room about ten feet square at Rocky Mountain Mental Hospital. The room had one large, round-cornered window, really a transparent spot in the wall on one side. It was unopenable, and also unbreakable, as it was made of a material that could not be cut or pierced without the use of power tools. But it did *apparently* give access to the pretty garden and lawns outside, which protected those in the room from claustrophobia. There was a door—a closed door—with a slit of one-way glass at eye level, looking *inward.*

The room held six people. One of them was a plump, nicely-dressed woman, her face set for the moment

in an expression of doubt. Two of the remaining five men were dressed in white hospital staff uniforms. Two others wore common street clothes. The fifth, dressed in white pajamas, sat on the edge of a cot and stared at the floor with an unfocused expression, mouth hanging open.

"Well," sighed Julia Logan, the plump lady, "if you don't think you can cure him here—" She turned to one of the men dressed in street clothes. "Why do I have to sign away all my claims on him? Why can't he come back to me after he's cured? I don't trust you people from the Science Centers—"

"Madam," the man said flatly, "the nature of the treatment is such that most of its value would be lost if the patient were to return to his old life. Anyway" —he glanced distastefully at the vacant-faced, pajamaed man on the cot—"he isn't much good to you this way. We're offering to take over his care and make a useful citizen out of him again. If you don't want to take us up, there are plenty of other mental patients in the hospitals of this country."

The woman still hesitated. She went over to the man on the cot, knelt before him. "Ed. Ed. Can you hear me?" she asked plaintively.

The man did not move, but after a second he said, "Yes."

"Dear," the woman pleaded, "Would you mind going away with these men?"

For several seconds the man said nothing, then he began to mumble, "Drops. Drops of rain. Rain drops. Rain drops of rain drops of rain—"

Regretfully the woman stood up. "All right," she said, "I'll let you have him."

All but the mumbling man on the cot left the room. After about fifteen minutes the others came back, the woman wiping an occasional tear from her eye. One of the men in street clothes produced a strait jacket from a small bag and the other helped him get the patient into it. "That isn't at all necessary," Mrs. Logan commented icily. "He is very mild. You don't have to treat him like a wild maniac."

"Lady," one of the men said, "don't try to teach us our business. Catatonics like this have a habit of occasionally cutting loose and raising hell. Have you got any children?"

The woman frowned, then said, "A son. Why?"

"How old?"

"Four years. And why do you want to know?"

The man grunted. "Just give you a little warning. Check any symptoms of introversion, regression." He jerked a thumb at the now safely bound patient. "The tendency to that is hereditary. Come on, Mike."

"Oh!" the woman gasped, half in dismay, half in indignation. "Doctor, those Science Centers—something should be done about them! They . . . I've heard they're plotting to take over the country and destroy all our democratic rights. What do you think?"

He shrugged. "As far as research is concerned, the Centers are first rate. Always ahead of the rest of the country. Like that new treatment they're going to give your husband. As far as their taking over the country—well, I wouldn't worry about it. After all, how could they?"

"Oh, use their horrible inventions as weapons, I suppose."

"I wouldn't worry. They never get *very* far ahead of the rest of the country in their research. I wouldn't worry."

A passenger copter settled slowly to the field at Kiowa Science Center. The door opened and a man jumped out and helped someone inside the ship lift a strait-jacketed figure out of it. Then the three walked—or rather two of them walked and the one in the strait jacket shuffled between them—into a building and reappeared a minute later in a car that swung onto a broad street and headed down it.

Thus came Edward Logan to Kiowa.

After a short ride the two psychotechnicians hustled him out of the car and into a big, flat, new building. Down corridors they went, and finally came into a room in which a young man sat at a desk with a book of tables and a pile of charts before him. He looked up. "Lethe patient?" he asked.

"Yeah," one of the psychotechnicians with Logan said. "Here's his papers. We got him at Rocky Mountain Mental Hospital. Had a devil of a time getting his wife to sign him over."

The young man at the desk shuffled through the sheaf of papers. "Case history. Wife's consent. Certificate of release from the Head Physician. O.K., boys, I'll take him."

The two psychotechnicians strolled away and the young man took the still heedless Edward Logan in tow and propelled him through a door at the back

of the room. One minute later, he was again sitting on the edge of a cot in a cell.

That evening before he left his office to the man on the next shift the young man studied Logan's case history and decided that there was good enough material in him for a psychotechnician, at least. He also left a note to the evening and morning shifts not to give Edward Logan any food as he would be started on Lethe treatment at 9:00 a.m. the next day.

The next morning the young man took Edward Logan out of his cell, along some corridors, and finally into one of a row of little rooms. A waiting biotechnician helped him strip off the patient's clothes and deposit him in a tanklike affair that allowed for the accurate adjustment of temperature, air pressure and composition, and other factors. The young man used a syringe to take a blood sample from Logan. This he then squirted into a sterile bottle and sent it speeding to the laboratory on the second floor via pneumatic tube. While waiting for the analysis report on it to arrive, he checked over the artificial heart, carefully connected it up with Logan's bloodstream, and watching the instruments and the patient for any sign of danger, a capsule containing the analysis report on the blood sample snapped into the end socket of the pneumatic tube. The young man told the biotechnician to keep watch on the patient while he looked over the report.

"Um, let's see," he said. "Physiological aging index 77.2, which checks pretty well with a chronological age of thirty-two years. Blood-group IV, Rh positive. Um. Nothing unusual. Let's go."

He examined the instrument panel on the tank. "Hm-m-m. Weight is one hundred sixty-two pounds. That'll be . . . ah,"—he glanced at a chart—, "fourteen point three milliliters of nutritive solution per hour." The biotechnician adjusted a control knob accordingly.

The young man moved his finger along a curve on another chart and then dropped it to the scale. "And he'll take a first dose of Lethe juice of seven point three milliliters, spread over three hours." The biotechnician twisted another knob and then stood aside to let the young man carefully check over the instruments, the equipment, and the patient. "O.K.," said the young man, "check him over every five minutes or so for the next three hours. If anything seems to be getting out of line, buzz me. I'll be in my office."

"O.K., Doc." The biotechnician followed the young man out of the little room.

Edward Logan lay motionless in the tank. His breathing slowed almost to a stop in compensation for the artificial oxygenation his blood was receiving as it passed through the equipment of the tank. His heart's beating became weaker as the artificial heart took over the load of pumping. Nutritive solution was trickling into his bloodstream to supply the cells of his body with fuel and materials. A series of devices in the tank removed waste products—carbon dioxide, ammonia, uric acid, and so on; in brief, each cell of his body was relieved from working to as great an extent as possible.

Also trickling into Logan's bloodstream was the substance the young man called "Lethe juice," a designation appreciably easier to pronounce than its structure-indicating chemical name. This stuff gradually passed through the walls of capillary vessels and ultimately penetrated into every living cell in Logan's body. The cells thereupon began to change to a manner highly unnormal for cells of a living body. Each one began to lose some of its individuality. About a century before, beginning in 1912, the great pioneer biologist Alexis Carrel had made a bit of chicken-heart famous by keeping a culture of cells from it alive in the laboratories of the Rockefeller Institute for many years. Such cells grown in culture with microbes carefully excluded and waste products carefully eliminated do not age, and do not acquire the individuation that comes in the process of aging. They do however retain their hereditary structure, as muscle cells or gland cells or the like.

The cells that made up Edward Logan were beginning progressively to lose the individuality that they had acquired as he lived and aged. They were beginning to become more and more similar to cells that had been cultivated for several "generations" in *vitro*.

It was not a simple, single change. Each cell changed by itself, and the change was gradual. The cells that were responsible for the composition of his blood serum altered so as to increase its growth index. His index of physiological aging began to go down—by means of it progress in the treatment

would be measured. The most recent changes that had occurred in his nervous cells—altering the relative resistances of certain synapses and so producing memories and behavior patterns—disappeared. With them disappeared the memories and behaviour patterns.

The total effect was to make Logan a younger and younger man. His blood serum became like that of a youth, the memories of his recent life—what there were of them—were obliterated.

At 1:00 p.m. the young man came into the little room again and checked over everything. Satisfied, he took a blood sample and sent it to the laboratory. A few minutes later the report came: Index of physiological aging, 77.1. It had gone down only a tenth in three and a half hours; but because of the greater velocity of fundamental physiological changes in childhood, the progress would accelerate as the treatment went on. The young doctor set the controls to introduce more "Lethe juice" into Logan's bloodstream and left.

So the treatment went on. "Lethe treatment" it was called, because of the utter thoroughness with which all memories were obliterated.

It was a case of Omar Khayyam's "Moving Finger" being called back to cancel out half a book or so.

All memories. Besides mental, psychological memories familiar to everyone, there are physiological ones, uncountable changes that occur in every cell of a man's body as he constantly adapts to the world around him, changes that give rise to his sense of duration. Lethe treatment wiped out even these.

It took time—about twenty-eight days in Logan's case. The process accelerated and became several times more rapid at the end than at the beginning.

The treatment could be stopped at any point, leaving the patient with a more or less complete, if faded, set of memories up to a certain age in his life. It was necessary to bring Logan's physiological age down to about two years, as his tendency to regress had appeared very early, possibly due to an hereditary weakness.

Aside from that, the Centers always carried the Lethe treatment that far for their own reasons.

As the treatment progressed, one by one Logan's physiological defenses, immunities to various diseases for instance, disappeared as the changes in the cells responsible for them were wiped out. Consequently it was necessary that he be protected from bacteria. To this purpose the tank was sealed hermetically and made aseptic, and various substances were introduced into his blood to fight any micro-organisms already present.

That technique had taken a lot of working out. It is recorded that Dacus and Fraenkel lost over a hundred dogs before they perfected it. A dog—or a man—in the late stages of Lethe is almost completely helpless to protect itself from many types of germ. Although the phagocytes are still active, the painfully built-up immunities are all gone.

At the end of the treatment, Logan had the appearance of a freshly-mature young man. But he did *not* look just as he had when he had been twenty-one years old. His body had the same cellular layout that it had had at the beginning of the treatment, but now the individual cells had altered, become younger. Actually his measured index of physiological aging was 11.4.

The young doctor introduced into Logan's bloodstream a substance that combined selectively with the "Lethe juice" in it, stopping the reversed flow of physiological time. Then he added other substances to immunize the patient against common diseases sufficiently that he could live outside the tank. After that he gradually eased off the actions of the artificial heart and the oxygenation apparatus, at the same time increasing the percent of oxygen in the air of the tank.

It took a week to get Logan's body working again to the point where he could function as an independent organism. Then the artificial heart was disconnected and he was removed from the tank.

A couple of psychotechnicians—not the two who had brought him to the Center—came and took Logan on a rolling table to another part of the building. They went into a bright room containing a bed, a table, two chairs, and several equipment closets. The floor was covered with a soft, rubbery material that a man's feet sank into a little as he walked. The psychotechnicians lifted Logan off the rolling table and put him on the floor. One of them pushed the table out of the room and then came back in, closing the door.

Logan lay relaxed where they had put him. One of the two white-clothed men got a hypodermic needle from an equip-

ment closet and drew into it a carefully measured amount of liquid stimulant to counteract the substances that had kept the patient passive throughout the treatment. After he had made the injection he and his comrade sat down and waited. About a minute later Logan began to move his arms and legs, his whole body. He rolled and kicked and flopped around. Finally he opened his eyes.

"You know," said one of the psychotechnicians, "I've handled nearly a dozen Lethe patients, but I still find this stage a little nauseating."

A small child's behavior in a small child is quite normal and perhaps pleasing; in a grown man it is so abnormal as to seem almost obscene.

The other man snorted. "You'd get used to it quick enough if you had to put 'em through the whole second phase, like I do. Well, I guess I can take care of him from here on out. So long!"

"O.K. I'll be seeing you." He got up and left.

The remaining psychotechnician got a book of data sheets and a pencil out of an equipment closet and went to work. Since the first phase of the treatment had stopped when Logan's physiological age was two years, he would be capable of approximately the same activities as a normal two-year-old. But precisely how well could he walk? What was his vocabulary, and how well could he pronounce words? How well could he handle his adult-sized body? The man had to know these and many other things to know just where and how to start Logan's retraining, which would ultimately make a sane, intelligent, capable man of him.

Before long Logan was sitting upright on the floor, staring about with an expression of naive wonderment.

"Ed. Eddie!" the psychotechnician called.

Logan turned to face him. "Yes?" The way he said it the word was somehow queer, hesitating, as if he was unaccustomed to using his vocal equipment.

"Eddie, I'm Joe. I'm your friend. I'm going to take care of you from now on."

"Joe." Logan seemed to think that over. Then, "Where's Mama?"

"She's gone. I'm gonna take care of you from now on." Then, before the patient could object further, the psychotechnician ordered: "Get up and walk over here, Eddie."

Logan got onto his hands and knees and then clambered awkwardly and uncertainly to his feet and tottered bowleggedly across the room to the psychotechnician, who then made a few brief notes in the data book. Logan sat down again with a thump and regarded the situation with a perplexed and distressed expression.

The psychotechnician looked down at him again. "Are you hungry, Eddie?"

"Uh, huh!"

"O.K. I'll get you some food." He walked across the room, pulled open the door to an equipment closet, and punched the communicator button for the kitchen. "A light first meal for a second-phase Lethe patient," he said. Half a minute later an opening appeared in a panel and a tray with a dish of food, a glass of milk, and a spoon appeared. The psychotechnician put the tray on the table and then said: "Eddie. Sit down in this chair and eat."

The patient complied, clumsily using the spoon to deposit the food in and about his mouth and dribbling milk off his chin and onto his hairy chest. The psychotechnician made more notes.

When the food was almost all gone, Logan stopped eating and looked doubtfully at the remainder. "I don't feel good," he whimpered.

"Better lie down," the psychotechnician said, and indicated the cot. He was not much disturbed. Most Lethe patients had trouble taking food the first few times after the end of the first phase. Logan did a little better than the average. He managed to hold down what he had eaten.

When the patient said that he felt a little better, Joe began to quiz him to find out how well he could talk. So far he had given a good account of himself on that point. Now the psychotechnician tested his knowledge of the meanings of a pre-selected list of key words.

After the psychotechnician had finally left, Logan went to sleep on the cot. He didn't realize it, of course, but he had a lot ahead of him. The Centers never, except in occasional experiments, allowed a second-phase Lethe patient to develop haphazardly as many children do, even these days. Instead they put the patient through a rigorous training course that took advantage of his superior adult body and nervous system to develop him as rapidly and fully as possible.

First Logan was trained in the use of his adult body. He was made to practice walking, and later running, jumping, and

other athletic activities. He had to practice using his hands to carry out increasingly more complex tasks. His diet was arranged so that he could live on adult food after a few weeks. He learned control and co-ordination. Within a year he was capable of handling his body as well as the average adult.

At the same time he was taught language. More words, and how to use them. Like nearly all Lethe patients he was able to learn amazingly fast at this stage, because he possessed their combination of an adult-sized nervous system and a high rate of flow of physiological time normally found only in very young children.

The psychotechnician Joseph Kruse was his father, mother, and schoolmaster. For friends he had the fifty-odd other second-phase Lethe patients at Kiowa Center and, as he entered upon more advanced studies, many of the brilliant technicians and scientists of the Center.

One of the great, long-term research programs that the Science Centers had worked on from the very beginning was the determination of the conditions for the optimum development of men. At the time Edward Logan was put through Lethe, the psychotechnicians of the Centers were capable of turning a child into a fine, sane, stable adult, provided they had full charge of its development. Because of this, children born and raised in the Centres generally made saner, healthier, more capable adults than those reared in homes outside.

Logan received the full benefit of these new training methods—for they were used on Lethe patients as well as children. The trouble with all the ways that had been tried to cure the functional insanities before A.D. 2000 was that they worked under a terrible handicap. They had to start with damaged, unsuitable material; they had to make individuals who had had unsane mental habits for over half their physiological lifetimes begin to think sanely. Schizophrenia, for instance. Somewhere early in childhood, say, the patient began to spend his time daydreaming, to refuse facing the problems of life. Then around the age of twenty he cracked up. The doctor had to change the fundamental mental habit of a lifetime, had to start that patient into the habit of facing his problems and solving them. Perhaps he failed; then the patient remained insane. If he succeeded, still—there were marks, distortions left. The patient could never be completely sane, by modern standards. Of course that was also true of the general population of the period.

The great value of Lethe treatment was that it gave the psychotechnician fresh, undamaged human material to work with. The first phase of the treatment along with everything else wiped out the unsane mental habits. The second phase developed the primitive, plastic creature that was left into a sane and intelligent human being.

It was a cure that operated by changing insane personality A into sane personality B—*different!* Thus Edward Logan, one-time office clerk, and more recently a mental patient at Rocky Mountain Mental Hospital became Edward Kruse, highly-trained psychotechnician of Kiowa Science Center. His surname was changed, as was usual with Lethe patients, to break connection with his past. He was a new person—literally!

Five years after emerging from first-phase Lethe, Ed Kruse had completed the basic training given to all Lethe patients. That meant that he knew enough and had a sufficiently well-disciplined mind to act as a responsible individual in the world of adults. At that time his physiological age was about eight and a half years, so that he was still capable of learning much more rapidly than a normal adult.

Dr. Alexander Dimitroff, one of the venerable founders of Kiowa Center, was lecturing in a friendly sort of way to several student psychotechnicians, Kruse among them. The students were scattered about the office of the aged scientist.

"No matter how you specialize," he was saying, "you'll spend a spell teaching. There are two reasons for that. First, the experience you'll get with people outside the Centers will be invaluable to you later. It'll give you something on which you can hitch all the theory you're going to learn. And second, the existence of a large body of teachers from the Centers in the outside world helps a lot toward the promotion of the Centers' great purpose—to use scientific methods to mold civilization for the advantage of the people in it. Every college student you convince of the value of our science marks progress. Say he gets married and has children. Having studied under you, perhaps he sees that his children get semantic training at least, and get it early when it counts. Or he talks to a friend, gets him to send *his* children to one of

our schools. Or maybe he even joins one of the Centers.

"We make progress each time someone studies one of our books or under one of our teachers. But even yet for every person we get properly educated there is another born in this marvelously over-populated country of ours who will not be. Even yet those fantastic superstitions, the religions, succeed in hampering us. And there are people like this mad Frietz fellow who denounce us and even try to legislate against us. We don't have the rest of the millenium to work in, either! One of these stupid, nationalistic states is apt to start a war if we wait too long.

"Oh! We don't have too easy a time of it! But most of you will have simply to be good students for a few years and good teachers for a few more and then you will specialize and do researches—perhaps! It's a good enough life, all right. But you will never forget that you are of the Centers, and that the Centers have a purpose in existing."

Thus, in the year A.D. 2022 Edward Kruse, formerly Edward Logan, found himself teaching the subject of Educational Psychology to a boy whom he knew to be his own son. Kruse at that time still had the appearance of a well-exercised young man about twenty-one years old, although his actual chronological age was forty-seven years. As a result, there was very little likelihood that John Logan would recognize him as his father.

As soon as he had got home to his apartment that first day of school, Kruse looked through his locked file of papers to find the duplicate of his case history that he had argued Walters at Kiowa into giving him. Here: First and only child, a son, born 2003. Name, John Edward Logan. How about—? He turned to the inside of the front page where he had glued a copy of the photograph of Edward Logan, age thirty, which had been included in the original case history. He looked into a mirror and compared the two faces. There was considerable resemblance, all right. Like that between older and younger brothers. The face in the photograph was softer, almost flabby. It had a double chin and a ridiculous mustache and there were pouches under the eyes.

His own face—the face he had now—showed the effects of fifteen years of discipline at the Centers. It was lean and assured.

He did not think that John Logan would identify him with the insane father who had disappeared so long ago.

He had already decided that it would complicate the situation needlessly to try to explain matters to the boy. After all, he was probably well adjusted to the present state of affairs by now, and he would probably have no feeling at all for a man he could never remember seeing as his father—especially since the man did not look much older than himself.

Frowning, Kruse began to analyze his own reaction. It was a little strange that seeing the boy had caused such a strong emotional shock, considering that he had no true memory of him as a son. After a few minutes Kruse decided that the reaction was probably linked with his desire to know about his life before the treatment, as show by his acquisition of this duplicate copy of his own case history. A harmless mental quirk.

Kruse was lecturing one day a few weeks later to his class in Psych. 166, the one of which John Logan was a member. He had just finished a brief dissertation on the system of training children used in the Science Centers when the boy put his hand up.

Kruse nodded at him. "Yes, Mr. Logan?"

The boy stood up and leaned forward, bracing himself by grasping the back of the seat in front of him with his hands. After assuming this belligerent attitude he began to orate truculently: "Mr. Kruse, I would be much happier, and I know that many other members of this class would be much happier, if you would spend more time teaching the material of the course and less time spreading Science Center propaganda. It is bad enough that you forced us to use a propaganda-stuffed Science Center text; but now you must take the class' time to talk *more* propaganda, and that I cannot stand."

He sat down, the class staring at him startled and amused. Kruse also was staring. "This *is* incredible," he thought.

The class was turning to look at him now. "Mr. Logan," he said, "among a number of facts that you seen to be ignorant of is that the department heads, not the individual instructors, choose the texts for each course. Do you have a class at five o'clock tonight?"

"No."

"Very well, you have an appointment in my office at that hour. Now please leave us to our propaganda."

The class snickered a little. Logan left, stony-faced, and Kruse went back to his lecturing.

At five o'clock Kruse was checking over some papers when the boy came in. He came up and stood beside the desk. "Well, what do you want?" he asked defiantly.

"Sit down," Kruse said, indicating a chair. When he had finished the paper he was working on, he looked up and said, "I am curious as to the real cause of that outburst in class today."

"*Real* cause? Why, just what I said."

"No; what I mean is, why do you hate the Centers?"

"I hate them for the same reason any lover of democracy hates them—they want to destroy our civil rights and run the country themselves. Set up a dictatorship. *You* should know."

"And what makes you think that?"

"It's common knowledge. The Centers have admitted it."

Kruse decided to abandon that line of attack as unfruitful. "What didn't you like about my lecture this morning?" he asked. "It was true, every bit of it, and quite pertinent to the subject. The modern theories of education have never been completely applied except in the Centers."

"Yes, it's true. That's the whole point! The Centers use their psychology to poison the minds of the children raised in them, and then their agents, like you, talk about it as if it were a good thing. You even suggest that we should send our children, if we ever have any, to the schools of the Centers to have *their* minds contaminated with undemocratic, irreligious nonsense."

Kruse was frowning, thinking to himself. Somewhere along the line this boy had been conditioned very strongly against the Centers. Let's see—

"Ah, Mr. Logan, did your mother hate the Centers the way you do?"

"What business is it of yours?"

"Did she?"

"Well . . . yes." Pause. "They took my dad when I was four. Forced her to sign papers giving him up. Later she tried to reach him, but the Centers blocked her all the way. I can't even remember what he looked like."

"Oh," Kruse sighed. "He was a Lethe patient, huh? Mental patient that they cured with a technique that was rather new at the time, I mean?"

"None of your—"

"Take it easy. I just wanted to say that Lethe patients never remember their former lives, and that they are always given scientific training to fit them for long, happy, and useful careers. It's better that they never recontact their original surroundings."

"Yeah, it's easy for you to say that. But think—Mom without a husband, me without a father all these years. Anyway, what do you want with me? If you haven't got anything more to say, I've got things to do."

"I see your point. Well . . . I can't have you making any more speeches in class like that one this morning. I'll let you finish the course, and I promise I won't discriminate against you, if you'll behave. How about it?"

"Well . . . all right. In class, I'll keep quiet. That all?"

"Yes."

He turned and swung out the door. Kruse leaned back in his chair and thought. He had a pretty good answer now to the question of why John hated the Centers. His mother, who never had approved of them, had evidently come to hate them actively after her husband's disappearance. She had communicated her hate to John. Now, after fifteen years of such conditioning, re-educating him to a sane point of view would be neither a simple nor an easy task.

In fact Kruse didn't see how he could do it.

One morning about a week later as Kruse was glancing through the school paper he saw the name "John Logan." It was at the end of a letter printed on the editorial page. What the boy had to say was substantially that the Science Centers were a menace to democracy and that their books and teachers should be kept out of the universities. That boy! He seemed intent on making a nuisance of himself.

As Kruse was walking home that night he met Joe Hokasai, a physical instructor fro Kiowa.

"Hi, Ed," he called, "you see that letter by that crazy student in the rag today? Has a Dark-Age mentality and wants to throw us out 'cause we come from a Science Center?"

"Yeah. I saw it. Craziest thing. Joe, he's my son, from before I went through Lethe."

Joe's flat, yellow face slowly broke into an amazed grin.

For reasons best known to himself, John Logan made his objections to the Centers less obstreperous shortly after that. Kruse never had him in another class during the two remaining years he instructed at the university. After he had gone back to Kiowa Kruse heard nothing of his son for a number of years. During that period he himself worked his way up into research.

One evening in the autumn of A.D. 2037 Kruse was eating supper with his wife and their three children. After he had mentioned that his work on a theory of telepathy was coming along fine and she had contributed a remark to the effect that her work at the school was going well, the conversation shifted to topics of general interest. By and by she mentioned that a new rabble-rousing opponent to the Centers had arisen to take the place vacated by Jonathan Baker's very timely death.

"What's his name?" Kruse asked, without much interest.

"John Logan."

Kruse looked up. "*Him* again! Huh!"

"What do you mean, 'again'?"

"Oh, he was a trouble-maker at the University while I was teaching there. I had him in a psychology class. Kruse paused uncomfortably, then went on: "The fact is, he's my son by the wife I had before I went through Lethe."

"Oh! What an *odd* situation! Does he know about it?"

"No. I don't see how he could, anyway."

"Oh, well—" She laughed. "Frank Heda told me today that an old man—about eighty—named Elmquist came to the Center with a hundred thousand dollars and wanted to be made young again, with Lethe. He was disgustingly disappointed when they told him that the treatment can't be given after the age of forty or fifty because of cell deterioration."

A few days later, Kruse was sitting in his armchair reading a new book on the mechanisms of insanity when the television set made a snapping noise within itself and came on. He had set it just after supper so that he would not forget to listen to John Logan's latest national speech. He wondered just what the fellow was saying.

Logan, at the age of thirty-four, still had the leanness of his youth. His face was grim and determined. "My friends, the American people," he began, "I have not been the first to expose the iniquities of the Science Centers. The list of those who went before me is a long one. I will mention only the names Reed, Denman, Frietz, and Baker. Martyrs! Four great martyrs!

"Why, martyrs, you ask? Just think back on the death of each of those men and you will know. Each of them died suddenly, of some disease, at the very moment that his agitation was beginning to take effect.

"That is more than a coincidence. I say it plainly — the Science Centers murdered those four men to shut them up. And as soon as they think I am dangerous, they will try to murder me, also.

"To forestall such attempts, I am going to take measures of self-protection. I am doing this not out of cowardice but simply to preserve myself long enough to speak the truth, and to make the job of murdering me so difficult that perhaps the Science Centers will be forced to tip their hand and so destroy themselves.

"You may wonder how death from a 'natural' disease can be murder. The answer to that can be found in hundreds of books published in the Centers. It is well-known that the science of the Centers is mostly biological science. Indeed, they boast of it! Listen to this quotation from Gernard Bakk's *'Third Millennium'*: 'One of the great new trends of the last century has been toward the rapid development of the sciences of Life, and especially the sciences of Man. The Science Centers have grasped this trend and concentrated it and emphasized it until now a new Renaissance may be said to be well underway. Where the old Renaissance saw the birth of the physical sciences, this one is heralding a new world in which Life and Man are the prime entities.'

"The Science Centers excel in biological science. I for one am well convinced that they are capable of using disease as a deadly weapon, and that they have done so already in the cases of the four martyrs, Reed, Denman, Frietz, and Baker.

"I am telling you this, so that if I should suddenly 'happen' to die one of these days, you will know at whom to point the accusing finger—the Science Centers!

"And now I leave you with this thought: If you wouldn't have your children taught by a Nazi, don't send them to a Science Center school, don't let Science Center teachers teach in your city's schools. Nazism and the doctrines

of the Centers are about equally antidemocratic. Good night!"

"Yi!" Kruse exclaimed, turning off the set. "That's dynamite! I don't see how he gets away with it, unless . . . yeah, I guess he *must* have somebody big behind him. No private citizen is going on a national network three nights a week. That takes money."

"I wonder if what he said was true—about those four men dying, I mean," said his wife.

"Well, it does sound pretty plausible. Of course there's no telling who would do the rubbing out, if it were done. Some psychotechnicians specializing in mass psychologics would run a few graphs and find that the guy is going to start doing some serious damage pretty soon—so he'd stroll across the street and get a biotechnician to help him, and Mr. Rabble Rouser would soon be a closed account."

"You know, it's funny," she said, "but in a way that nut is right when he says that the Centers are antidemocratic. It certainly doesn't fit into the old idea of democracy to kill a man just because he disagrees with you as to how things should be done."

"Yeah," Kruse answered, "but there is a difference between mere opinion and scientific truth. We *know* that we can improve the lot of the human race enormously if we're given a chance. When some half-cracked orator who should have had a structural differential stuffed down his throat at an early age comes along and tries to stop us—well, we can't afford to sit around and talk ethics. He has got to be brushed out of the way before he does any serious damage."

"Obviously," she said, "but there are a lot of people who wouldn't understand that."

As the weeks passed and the first snows of winter loomed in the immediate future, John Logan's popularity grew and grew. One evening Kruse watched a big passenger copter unload nearly a dozen Science Center teachers who had been chased out of several small towns fifty miles to the southeast. They stood there on the field shivering in the sharp, freezing wind and waiting for cars to arrive and pick them up. Kruse watched their faces. They were bitter, resentful. "This must be happening all over the country," he thought. "Why hasn't somebody done something about it?" He took a deep breath and blew it out in a cloud of mist that was whisked away by the wind before it could fade. Then he turned and walked rapidly toward the Psychological Research Building. Five minutes later, as he strode into it, he had an idea of how to proceed.

First, it was evident that by now several attempts *must* have been made to erase John Logan. He was doing too much damage; *somebody* had tried—and failed. It was also evident that before long someone would succeed. The technicians of the Centers had a dozen ways of killing people not known outside, and by now they must be determined to use them all, if necessary.

It suddenly occurred to Kruse that he did not want Logan killed if it could be helped. It was not, he told himself, that Logan was his son. He had other children now, that he loved dearly. It—or was it?

He opened his office door, went in, and sat down at the desk, still slightly shocked at the idea. It was incredible that he still thought of Logan as a son, considering what the man was doing. But the fact remained—he wanted to keep Logan alive because the man *was* his son.

Also, most emphatically, he wanted to have him stopped in his campaign against the Centers.

Well—there was still that idea he had had walking up here. He would have to try it, at least.

He stood up and started collecting papers and equipment. He stopped to dial a number on the videophone and tell his wife to pack a bag for him. He ate supper at home, gave himself an antifatigue shot, and checked out a small jet plane. Just after dark he took off and headed west, climbing to get over the divide. Slightly under five hours later he landed at Turlock Center, the field's great floodlights turned on momentarily to receive him.

He drove directly to the Psychological Research Building and left his stuff in the car as he went in to see whom he could dig up at that hour of the morning.

In the lobby was a student psychotechnician behind a desk, busily studying some lesson. He looked up as Kruse and a gust of icy wind came in.

"Hello, I'm Dr. Edward Kruse of Kiowa Center. Anybody here this time of night? I just got in."

"Well . . . Dr. Hamilton is over in Section D running some tests of some kind. He wouldn't want to be disturbed, though—"

"That's O.K. Can you assign me a small lab and a room with a cot for the

time being? I can get started tomorrow morning, I guess."

"Yes, sir. What's that name again?"

The next morning Kruse found some men who had been working on the problem of getting rid of John Logan. Kruse had felt fairly sure that they would be here if anywhere, since this Center was closest to the fortress-home Logan was said to be living in. Carmichael and Hoskins were the mainsprings of the effort to rid the world of Logan, and to them Kruse offered his services and presented his own, nonlethal plan for accomplishing that end.

"It is most fortunate," Kruse said, "that my researches were far enough progressed to allow using them now. Well, what about it, gentlemen? Will you let me take a crack at it?"

"As I see it," Hoskins protested, "there is one serious flaw in your plan. We would have to obtain a close analysis of the structure of Logan's brain in order to focus your . . . ah . . . mental scrambler on it. And to do that we would have to get instruments into the same room as Logan. I tell you that that is quite impossible. The man has himself protected with the utmost thoroughness."

"Wait," Kruse cut in, "I have a way of getting around that. As I told you, when two brains are in close telepathic contact any thought that occurs in one occurs in the other also. I brought along an outfit that's tuned to my brain. I'll get to see Logan, and you can use my brain as a relay station between his and the instruments. It'll work all right. I've done it before, under laboratory conditions."

"About all *that's* likely to accomplish," said Hoskins, "is to end your distinguished career of research. Already we've lost one man trying to get at Logan personally. Now we're getting ready to knock him off at long range using an effect discovered two years ago by Murphy."

"You mean that cell degeneration phenomenon?"

"Yes. We're building the generators now."

"But how are you going to focus it? It would look slightly suspicious to have everyone in the area die suddenly of old age. They'd be howling that we did it right off the bat."

"We can't focus it. And a few unprovable accusations will hurt us a lot less than Logan is doing right now. You don't seem to realize the seriousness of the situation."

"I do realize it. That's why I'm willing to risk my skin trying my plan—which does have the advantage that the means of disposal is a lot less suspicious. Anyway, how about it? All I ask is that you fellows handle my equipment at this end. Just let me try. If I fail, then you can flatten Logan in your own way."

Hoskins and Carmichael looked at each other. "O.K., we'll co-operate," said the former.

Kruse stopped the car in front of the closed, steel gate of Logan's "fortress," got out, and walked up to the gate, glancing upward momentarily at the arrowhead of fighting planes patroling over-

head. A slit opened in the gate at eye level and after a moment a voice said: "What do you want?"

"I want to talk to John Logan."

"Yeah?" There was a nasty chuckle. "Imagine that! On what business?"

"I am his father, and I want to talk to him about the Science Centers."

There was a stunned silence on the other side of the gate. Finally the voice said: "Please wait a minute." Kruse could imagine the guard making hasty phone calls for orders. He had carefully gauged the psychologics of that audacious pronouncement; it should interest Logan enough to gain Kruse admittance.

It did. The gate opened. Kruse stepped inside, and the gate clanged shut again. Kruse smiled at the six men with machine guns and politely lifted his hands into the air. One of them searched him and seemed mildly surprised to find his pockets already empty. He then stepped back and uttered a curt command: "Strip!"

When Kruse's clothes were all on the floor, the man ordered. "This way."

A minute later Kruse had had a blood sample taken from him, had been X-rayed as a whole, and finally had been put into a small cell with gunports in every wall and the ceiling. "It is a good thing," he thought to himself, "that I didn't try to bring any instruments in with me. If I had, I'd probably be dead by now."

There was, he observed, a television camera in one corner, and it was in operation. Doubtless Logan was looking at his image this very instant, speculating as to his purpose.

He was counting on surprise at the visitor being *him*, and a certain factor of personal courage, to insure that Logan would grant a personal interview and not merely talk over an electronic communicator.

Once more his anticipations were borne out. The door of his prison opened and guards signaled him to emerge. They took him into what was clearly a special audience chamber. An armor-plate partition divided it into two parts communicating by a door, which evidently could be closed at an instant's notice by a sliding panel of more armor plate. Logan was sitting where Kruse could see him through the door.

"You will stand where you are," he said, "and do your talking from there."

"You are taking exceedingly elaborate precautions," Kruse said smiling.

"You and I know their necessity. You said that you are my father. Can you prove it?"

"I didn't bring any documents along, and you probably wouldn't have believed them anyway. But you surely can see my resemblance to yourself and to photographs of myself before I went through Lethe."

"Yes," Logan said, "there is a resemblance. And I realize that I am taking a chance letting a Science Center man get this close to me, but you know I'm no coward. What do you want of me?"

Kruse had carefully considered what the text of his speech would have to be. If it were not convincingly sincere he would probably never leave the "fortress" alive. Moreover, he had to be careful to say nothing that could be used against the Centers, as there were almost certainly microphones picking up every word he said and throwing it on wire.

"I came here," said Kruse, "to plead with you. You hate the Science Centers, and you've been doing them a great deal of harm. Yet you evidently care for the people of the United States, and I hoped I could make you understand.

"In one of your speeches you emphasized the fact that the Centers specialize in biological science. You even quoted a section from one of Bakke's books. But you talked as if the sole purpose the Centers had in developing the sciences of life was to use them to commit murder, which even you must know to be untrue. Actually, the great purpose of the Centers has always been to give better lives to a greater number of people. The technological civilization that grew haphazardly from the old Renaissance offered material gains to many people, but only to the great detriment of their development as human beings. Mental diseases and general unsanity were not the only prices the race had to pay for its selfish pleasures.

"The Centers set out to discover the conditions under which men become great men. And they have succeeded to a point. They are transmitting the benefits to the general public by means of their books and teachers and schools. All they want to do is help.

"You are hindering that work, and destroying progress already made. I came here to ask you to listen to reason. You are pushing the whole race back toward the Dark Ages—"

"Do you mean to say that you came here to ask me to stop fighting?"

"With all my heart, I beg you to do that. You have already wrought incalculable damage—"

Now, Kruse thought. *Now!* He made the mental effort that put their minds in contact and at once made his own mind blank. Two seconds was enough for the instruments to get the data. After that time he broke the contact and waited for Logan to speak or show alarm. Even if Kruse were killed now, Hoskins and Carmichael had their weapon to dispose of John Logan.

At last Logan spoke, and it cost Kruse an effort not to collapse from sheer relief as he heard the words: "Throw him out." The armor-plate door clanged and two guards took his arms and led him back to the room where his clothes were. He put them on without much haste and finally went out the opened gate and drove away in his car.

Hoskins was more than a little surprised to see Kruse still alive. Kruse

hastened over to his instruments and examined them. They had functioned perfectly! "We've got everything we need now," he said.

"Well, let's hit him, then," Hoskins exclaimed.

"Don't be impatient. It'll do the Centers more good if we wait until he's making his next speech. The psychological effect of that on the masses will be very good, from our point of view."

"You're right," Hoskins admitted.

So it was that several hours later Kruse, Hoskins, and Carmichael were waiting and listening in the laboratory when Logan began his speech.

"My friends, the American people, tonight I am going to expose more of the means by which the Science Centers poison the democratic ideals of our country. I have already told of their schools and teachers—"

"Give it to him," Hoskins growled. Kruse nodded and threw the switch that sent neural currents flowing into the little bit of carefully nurtured brain-matter that had been "tuned" to John Logan's brain during the afternoon. At once the bit was in telepathic contact with Logan's brain. The haphazard neural currents of the nerve-cell culture blended with the carefully organized thoughts of the orator and produced—*chaos!*

John Logan was still speaking: "The books are full of . . . angle-worms . . . and down the . . . son . . . biological . . ." He stopped talking and frowned as if trying to concentrate. Then he was cut off the network and an announcer appeared. "Due to circumstances beyond our control, John Logan's broadcast cannot be continued tonight. We now bring you an interlude of transcribed music." The screen showed an orchestra, which began playing. Kruse turned the set off.

"How long will it last?" Carmichael asked.

"As long as this scrambler stays on. We'll have to have a permanent maintenance man assigned to it. Of course there's a good chance that his mind will be wrecked after, say a year of it. I don't know. That's one experiment I never tried."

"Well," said Carmichael. "I'm glad you came to help us. Your plan certainly worked."

"It hasn't run its course yet," said Kruse.

"How do you mean?"

Kruse told them. He also told them that he was Logan's father. When he was through, Carmichael just looked at him and grinned.

It was a fairly cool summer day in A.D. 2043. A jet plane came scooting in to land on the field at Kiowa Science Center. After it had stopped rolling the door swung down and someone inside pushed a strait-jacketed figure down the steps to the ground. Then a man emerged carrying a black equipment case. A car came rolling up, Edward Kruse at the wheel, and the two arrivals got in, the bound one with assistance.

A few minutes later they all got out and went into a big, flat building that was no longer new. They walked down long corridors and finally came into a room where a young doctor sat at a desk. "Lethe patient?" he asked.

"Yes," Kruse answered. "This is the one I was telling you about—my son, John Logan!"

COSMETICS

By JOHN D. MacDONALD

An interesting proposition on the Importance of Being Ugly.

JASON BLOOD sat in a deep chair in his study and for the dozenth time pressed the button in the chair arm which projected Carol's letter onto the screen opposite him. The first projection had been a considerable shock, but with subsequent projections, in the light of his newly discovered loneliness, he found that he was able to view her animated face with the same contempt, the same amused contempt that he viewed all the others. But there was pain in it too, because she had been his wife for many years.

He stopped listening to the sense of her words and examined the structure of her face. He knew that it was Carol because of the identification medallion on the left side of her tunic. He realized that he was glad that, throughout all of her autocosmetic changes she had retained a delicate bone structure around her eyes, at her temples. Not like some of the others who diverted themselves by frequently shifting to the grotesque, making life a succession of masks—the lovely and the horrible, a spiced cookery of flesh and outlook.

He guessed that probably he had been misled by her conformity to what he liked in her—the tall leanness, the fragility and the wide, clear eyes.

But the letter was a refutation.

The face on the screen looked into his eyes. "I suppose I'm somewhat of a coward, my darling, in telling you this way, but you see if I tried to tell you in person, you'd find some way to get around me.

"Do you remember when we were first married? You had none of these silly scruples about autocosmetics at that time. Our love was freshened by the rhythm of variety. Remember how I'd leave you a note telling you how I wanted you to look? Darling, you were such a wonderful succession of tall, strong men—and I tried so hard to make myself into all the types of beauty that you wanted to possess.

"But now these things which you mysteriously label 'principles' have come between us. You have made no change in four years, and you talk about 'solidification of personality' instead of about what you can do to please me. Jason, darling, I don't like the form you selected for yourself four years ago. By retaining it, you are not living up to your responsibilities as my husband. I hate that lean, ascetic face, the thinning hair, the knobbled knuckles, the harsh look in your eyes.

"You seem to have lost all gayety. I am constantly making excuses to my friends. They consider you queer and reactionary. Our love needs freshening, my dear, and you refuse to help. I have done all that I can do. You take life too seriously, and you pay too much attention to that horrible Karl Dane and to your interminable discussion with him.

"So I am leaving you, Jason. I have found a man who is something like what you used to be, and I have instructed him on the autosuggestions you used so that he can look as you used to look. I will always pretend that he is actually you, my darling.

"Please forgive me, and when you decide that you have been wrong, I will come back to you."

The vision on the screen faded. Jason Blood stood up and walked over to the wide window that looked across the terraced parks of the city The bright afternoon sun shone on the couples and groups that strolled aimlessly along the paths. The men were all tall and incredibly handsome. The long-limbed women were the apex of the dream of beauty which had existed through the ages.

He cursed silently and turned away

from the window. Where the others saw health and beauty, he saw only an incredible dullness. He smacked his bony fist into his palm. If only he could drop this thing in which he believed. The autocosmeton which Carol had used so frequently stood silently in a far room of the house. A constant temptation. If he could forget what he believed in, if he could subject himself to the machine, put on the disk of identification and then seek out Carol—see the new delight and the love in her eyes—

He heard footsteps approaching, recognized the heavy steps of Karl Dane, and smiled bitterly as he realized how close he had been to giving up what they both believed in.

Karl Dane was a big man with pads of flesh around his small eyes, a mountainous belly and fat, freckled hands. He was an atrocity in a city of beauty.

He scowled at Jason, sat heavily in a chair and said: "Fenner has gone over."

"No!"

"Yes. He got tired of fighting—tired of trying to beat into their thick skulls the fact that they're killing the race. He turned himself into a pretty boy this

morning and now he's out roaming the city, beaming foolishly at the rest of them. What's the matter with you?"

"Carol left me this morning," Jason said flatly.

Karl chuckled. "Poor Jason! You thought she was different, didn't you? I knew better. She's like the rest of them. She just stuck around hoping that you'd change, that you'd decide to give up your silly ideas about being a savior of the race."

"I don't want to discuss it."

"Don't get touchy, boy. You and I can't afford to quarrel. We're the only two thinking beings left in the city."

Jason felt his quick irritation slip away. He sat down and said helplessly, "Karl, we're not getting anywhere. I'd like to get a sledge and smash every autocosmeton in the city."

"And they'd kill you with a smile and rebuild them. I tell you, we've got to pick our recruits young and get them to sign a solemn pledge that they will never alter the faces and figures that God gave them. Then we'll begin to get some place."

"But, Karl, we can't offer them a thing except a shorter life."

Karl Dane frowned heavily and stared at the wall. "For the last week, Jason, I've been doing research into how it all started. Maybe by backtracking we can find the answer. Let me give you the highlights.

"It started back in the mid-thirties of the last century. Maybe a little before. In 1933 C. L. Hull did some work on suggestibility. In 1938 H. F. Dunbar published a work called 'Emotion and Bodily Changes'—through Columbia University Press. F. A. Pattie did some work in 1941 on Hypnotic Suggestions. All that was the basic groundwork.

"In 1952 L. K. Bagwell published 'Hypnosis for Anaesthesia and Hemorrhage Control' and got a lot of publicity. Then Labot, in 1955, stimulated by Bagwell's work, applied hypnotic suggestion to healing and managed to greatly stimulate the growth of tissue. The early boys showed that by a concentration of the psychic processes, localized peripheral effects could be produced.

"With the drugs that Labot used, he could go far beyond mere peripheral effects—in fact, by a concentration of the psychic processes, he could cause internal tissues to part.

"You can see that all this was heading toward the question of hypnotism versus operative technique. But it wasn't until 1964 that the suggestions to the patient in hypnosis could be adequately controlled. The four phases—anaesthesia, destruction of tissue, hemorrhage control and healing—were already in existence. With the development of better control of suggestibility, good hypnosurgeons began to do simple operations.

"They learned from these operations, and began to do more complex ones. The successes were startling, and manual surgery began to die out. Why weaken the abdominal wall with an incision when the patient himself can be forced to concentrate his psychic processes in such a manner as to destroy his own vermiform appendix and heal the surrounding tissue?

"Everything was just dandy until in 1965 the famous clinical case of a Mrs. R. M. occurred. Now this woman was as ugly as sin—so ugly that the mere fact of her ugliness was a matter of such great importance to her that under hypnosis the question of autosuggestion wasn't entirely wiped out. During a hypnotonsilectomy her subconscious shot additional suggestions into the operation so that, after it was over, an outsize nose had been reformed, a low forehead had increased in height and a set of protruding teeth had turned back into a more normal position. Her own husband barely recognized her. She got a big publicity play and every haggard hag in the world started to scream for cosmetic hypnosurgery.

"Between 1965 and 1998 it is estimated that ten thousand cases a year of pure cosmetic surgery were handled. Coordinate with this accomplishment, if you want to call it such, were further advances in traumatic hypnosurgery so that all infectious and organic disorders were brought under control. The new era of international health had arrived. They began to work on the age problem, taking the old folks and, in a series of hypnosessions, regenerating the tired tissues and turning them into youngsters. Folks still died of old age, even as they do today, but they died at a hundred and fifty and died looking like next year's debutantes.

"All of the world's billions clamored for attention and the richest men were the hypnotists—and the busiest. They coined money and power and set up lobbies to restrict the number of eager young people going into the field. Amateurs killed a lot of patients in clandestine sessions. They also turned out some monsters and the regularized hypnosurgeons refused

to repair the damage, leaving the monsters to roam around loose as a warning to those who wanted to take the chance of being operated on by amateurs. It was a mess.

"In 1998, International Motors came on the market with a crude model of what we know as the autocosmeton. The hypnotists tried to block it and nearly succeeded when a bunch of people gave the machine silly suggestions to read back to them under trance and it very properly killed them. A man named Therbolt invented the controls which today keep any cosmeton from reading back a killing suggestion. The early models worked just like the ones the fools use today. You decide what you want to look like from the booklet and read the code words to the machine. Then you take the receptivity drug, sit in front of it and watch the little rotating flashing gimmick. When you go under, the suggestions, along with the standard control suggestions, come back to you and the concentrated psychic processes do the rest. In the early days you sat in the trance for twenty hours and when you came out of it, the new tissue was still pretty tender, but, as you know, it's only a three-hour job now. Take your pill and wake up with a new face and a new figure to go with it.

"It led to a lot of crime at first until the individual identity disks were made standard and the death penalty was invoked for going without your disk or with the wrong one."

Jason sighed. "That's all very nice and a good job of research, but it misses the point. The thing I'm interested in, Karl, is the opinions of the rebels."

"Their opinions in the early days weren't any different from ours. And they were just as helpless. I don't know who noticed first that there were no new inventions, no new art, no virile literature. The world gradually switched over to a status quo setup, with all industry only concerned with maintaining the products already distributed. But it was Hanley in 2026 who gave us the reasons. Hanley was the first guy to get notoriety by refusing to change himself. Ugly beast he was, too. His theory was that the best part of the human personality is conditioned by the face we present to the world. Our actions are in part a compensation for this static impression that we give. Thus, in a world where you can have a new face tomorrow and a new figure—provided you get tired of the old one—there was no incentive to force changes in society in compensation for the static impression that you gave to all people. Also he brought in the idea that much of our great art and literature were created by people who were seriously and hopelessly ill—conscious of their illness and striving for some sort of immortality. A subsidiary facet is the idea of increased longevity lessening the consciousness of the shortness of life, which in turn, has resulted in creation.

"We are in an era where the entire ego of the common man—and woman—is built around the idea of eternal change in outward appearance. Thus we have achieved a norm in personality that is deadly. There is no sublimation of dissatisfaction into creative channels. No invention, no art, no creative thought. Just maintenance. That's all. The Age of Maintenance.

"A hundred years ago we thought we could reach the stars. We were well on our way. Atomic drives for space rockets and all the rest. What happened? The sad little men of fifty and sixty who were sweating out the details in labs suddenly discovered that they could be twenty again. A big, lush, brawny twenty with fine muscles and a handsome face. They didn't want to take their beauty back into the lab. So they got maintenance jobs, a few hours a day. The same way with all other fields of endeavor. Makes me sick to my stomach. Where's our tremendous destiny that mankind used to talk about? Solidified. According to them, we've got it. The lines of our cars and boats and houses and aircraft will never change. Just our faces.

"True, war went out with progress. But not for the same reason. Who'd want to become a soldier and take a chance on getting holes in that beautiful face. The soldier could regrow arms and legs that he might lose, but if he was killed it would cut short a hundred and fifty years of wonderful pleasure and admiration of self. Jason, the thing I hate about the world more than anything else is that it's desolately dull. I guess we two are symbols of the past. Maybe we ought to turn pretty and get out and play with the girls—stop thinking, stop brooding, stop trying to put the big silly mass of mankind back on the tracks with full steam ahead."

Jason smiled crookedly at him. "Are you going to emulate Fenner?"

"No. I just like to talk. I *am* worried, though. I've got a hunch my heart is going bad. I'm carrying too much fat around. I might die tomorrow. The

instinct of self-preservation tells me to take a few treatments and cut the fat and repair the heart and become pretty —and probably dull like the rest of them. Should I prostitute my ideals for the sake of personal safety?"

Jason felt quick concern. "Karl . . . maybe you ought—"

"Nonsense. I'd rather be dead than bored. Let's get back to the point. What can a couple of vestigial remnants of the past like the two of us do to jiggle mankind out of the rut. You've tried to talk to them, haven't you?"

"Sure. The young ones are the worst. Their education has been so much skimpier. You try to get a simple idea across and they look at you blankly. Then they say, 'Mr. Blood, why don't you take a change? You talk so good that you ought to have the looks to go with it.'"

Karl sighed and stumped heavily to the window. He said, with disdain: "Look at 'em! Strutting like a bunch of prize roosters. They all look alike. Maybe this is the age of Duplication. I've got to get back, Jason. I've talked a young girl into coming around to my place at four. She seems brighter than most and I'm going to see if I can get er interested. Maybe if I can make her mad enough, she'll start thinking."

"Good-by, Karl."

After the heavy man had left, Jason Blood was once again alone with his need of Carol, in his thoughts of quiet desperation. To be so alone in a world where they were all so obviously contented, so oblivious to their own plight. He sank back in the chair, a lean, spindly man of less than average height, with the thin inbred face of a dreamer. He had copied the face and figure from an old text, from a picture of one of the world's famous philosophers. That was four years back. He wondered what seed of discontent there was in him which made it impossible for him to conform with the rest.

Through the open window he heard their voices. They laughed. They were very gay. Jason's thoughts were close around him, like a small cloud of gloom in a bright world. A dying world. A world of the status quo.

As he sat, thinking, a tall girl tiptoed to the doorway and looked in at him. Her eyes were soft, but the line of her lips was determined. She was tall, and soft blonde hair fell to her shoulders. Her features were regular and perfect. She wore a close-fitting tunic which crossed her breast leaving one shoulder bare. It stopped midway between knee and hip. She wore sandals of gold.

She looked at the back of Jason Blood's head, and then beckoned to someone behind her. He came through the doorway, stepping as quietly as she. He was a tall Viking, his deep chest bare and symmetric. He looked troubled. He licked his lips and glanced at her. She nodded.

In his right hand he carried a short club made of rubber. He raised it and slammed it heavily against Blood's head, just over the ear. As Blood slumped forward, the tall young man caught him.

He picked him up easily and carried him out of the study, back through the house, Carol walking silently behind him. Tenderly he lowered Blood into a chair placed before a small austere machine.

He whispered: "Is the suggestion all set?"

"I did it this morning," she said.

She took a hypodermic from a drawer of the machine and with deft, practiced gesture, filled it and injected it cleanly into Blood's upper arm. She waited a few moments and then slapped Jason Blood's face smartly. He stirred and moaned. She compressed her lips and slapped him again. He opened his eyes drowsily and looked up at her. His eyes flicked from her face to the identity disk that told him that it was Carol.

"Carol!" he said thickly. "What—"

She flicked the switch on the machine and a brilliant light played on a small metal whirligig, like a toy, set in a frame near the top of it. Jason looked at it, and tried to look away, his face twisting with sudden alarm.

"No!" he said loudly. "No!"

But she ran her fingers through his thinning hair, and even as he spoke his eyes became glassy in the intensity of his stare at the whirling toy.

The voice, her voice, came from the machine. Soothing. Calm. Confident. "Jason Blood, you are very sleepy, very sleepy, very sleepy, very sleep, very—"

Carol took the young man's arm and led him from the room. In the outer hall she said. "Thank, you, John."

"It means that I'm losing you, of course. Just when I'd found you. Carol, I wouldn't have done it for anyone else."

"I know that," she said simply. "But it was the only way I could bring him to his senses."

"If it doesn't work, Carol, I'll . . . I'll be waiting." He turned and left quickly. She stood for long moments in the hallway and then returned to the

room where the autocosmeton droned quietly. She took a critical look at Jason, and then, feeling slightly ill, walked out of the room. It was very disquieting to look at the work in process. She took a scented shower and climbed into her wide, deep bed. She fell asleep with a small smile curving the corners of her mouth.

Jason Blood came slowly up out of deep sleep, a consciousness of vitality and strength making him yawn and stretch luxuriantly before he opened his eyes. He froze, his arms extended, his narrowed eyes looking at the dark and silent shape of the autocosmeton in front of his chair.

He had guessed, while awaking, that he had fallen asleep in his study; this was an entirely different part of the house.

What was it? Something about Carol —her fingers touching his hair, the bright revolving toy on the machine—dimly remembered, as something seen in a dream. He slowly lowered his arms, and, glancing down, saw with a touch of horror, that his lean pale arms were longer—thick, bronzed, evenly muscled. They weren't his own hands. Stranger's hands. Solid. Square. Well-formed, with long tapering fingers.

Could Carol have been responsible? Of course! He jumped up so quickly that he knocked the chair over. What a foul trick! Somehow, she had managed to get him out to the autocosmeton. What would Karl say? The strange hand ran over his face, over unfamiliar planes and angles. He remembered that somewhere he had the original suggestion table which he had used four years before. He began to relax. It was simple. Merely give himself a second treatment and return to the familiar face and figure.

He would demand an explanation from Carol. His short tunic was uncomfortably tight. He hurried through the house, found her asleep in the bedroom. He looked down at her placid, sleeping face, feeling the drive of his need for her.

A huge mirror was built into the far wall. He was curious as to what Carol had done to him. He turned toward the mirror and inspected himself. He saw a man in his early twenties, over six feet tall, with enormously broad shoulders, a slim waist and a flat, tight belly. The arms and legs were smoothly and beautifully muscled. He was an even bronze tan. Dark blond hair curled crisply on his head. The face was good, a lean face with a quizzical look about the eyes, a touch of humor in the set of his mouth, slight hollows in the cheeks.

He arched his back and expanded his chest, admiring the play of muscles, the construction of the superb body.

Young again! Alert and vital and full of the pure joy of healthy existence.

Carol stirred, opened her eyes and looked up at him. He saw the quick admiration after she had checked the identity disk pinned to the tunic which was no longer large enough.

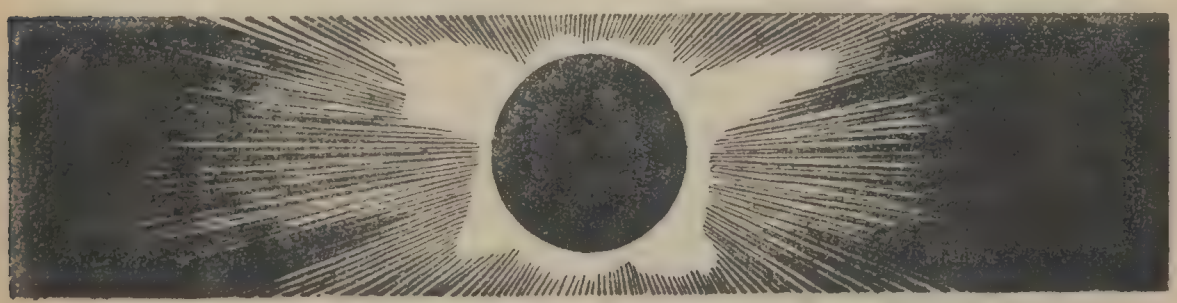
"Darling!" she said softly.

He stood there and suddenly Karl Dane became a very distant and silly man who persisted in clinging to the past. This was the present! The eternal present!

Picking her up in his strong new arms, he walked with her to the wide window. Her head was on his shoulder and they looked happily down into the terraced parks of the city where, in the first gray of dusk, the wandering couples and groups made brilliant dots of color against the cool green.

"You've been away so long, my darling," she said gently.

"I'll never leave you again."



THE UNDAMNED

By GEORGE O. SMITH

Generally speaking, bomb defusing squads have short, and not very merry lives. But the Martians had cooked up a fuse that couldn't be defused, no matter how skilled, quick-thinking, or clear-headed the defusing expert!

Plutonium was an equalizer. Nations learned the art of being polite, just as individuals had learned. To lash out with Plutonium wildly would be inviting national disaster, and to behave in an antisocial manner would get any nation the combined hatred of the rest of the world—equally a national disaster.

This was surface politeness. Beneath, the work went on to find an adequate defense, for now that all nations were equal, the first capable of defending itself was to be winner. Ultimately, atomic death was licked. Nicely licked but only at the expenditure of more power than it took to develop the atomic weapon itself. It was, however developed. And that nation then lashed out—to find that other nations of less belligerency had also licked the problem

The war—fizzled. For the wall shield that killed the effectiveness of the atomic bomb found no difficulty in stopping a lesser weapon.

All war—fizzled. And nations looked at one another and formed the Terran Union. Then the Terran Union looked to the stars for a new world to conquer. They found Mars ready and waiting.

The Terran Union colonized Mars and exploited the Red Planet as men have always done with a new frontier. The next hundred years wrought their changes and the Martian Combine fell away from the Terran Union because of the distance, the differences of opinion, and because of slight mutational changes.

There were interplanetary wars. The First was fought to eliminate the fact of governing Mars from Terra, the Second was fought to stop interplanetary piracy and to force both planets to respect the integrity of the other. The Third Interplanetary War was started because of sheer greed.

During the Third Interplanetary War, atomic bombing sprung up, died, and then continued on a very strange nuisance value basis. It became complex, and upon the 1327th Day of the Third Interplanetary War, interplanetary ro-bombing assumed a most dangerous aspect. The swift action of a small group averted disaster, and from that day on, the course of the Third Interplanetary War was assured.—I. A. Seldenov's History of Sol, Vol, IV.

The call bell tinged gently in a code that pierced sleep.

Colonel Ralph Lindsay reached out sleepily and nudged a button at his bedside. Equally sleepily, he donned trousers over his pajamas, slipped his feet into scuffs, and carefully headed for the door. The open door swung a shaft of light across the bed, and Lindsay opened his eyes wide enough to determine whether Jenna were still asleep.

Satisfied, Lindsay went down the corridor of the ship blinking at the ever-present light. He let himself into the scanning room and dropped into his chair. He picked up the phone and said: "Lindsay speaking, answering 3379X."

"General Haynes, Ralph. They got one through."

"How?" asked Lindsay, coming awake.

"Super velocity job. The finders were behind by a quarter radian at least."

"Jeepers," grunted Lindsay.

"Say it again," returned the general.

"We thought we were bad when we let one out of five hundred slip through to you. This, remember, was one out of one. Period. If they use 'em in quantity —and I see no reason why the devils won't—I can see a good record all shot to pieces."

"Where's it headed?"

"According to the course-calc, it should be hitting Mojave most any minute."

"Well, I'd better get on it," said Lindsay. "May I contact you later?"

"Do so, by all means," said the general, signing off. "We can't permit things like this to happen. I won't hang my head in shame at one per cent missed, but when one hundred per cent of a shipment runs through, I'm scared."

Lindsay mumbled an agreement and then clicked the switch to another line. That would be quicker than juggling the hook for communications central. The new line came in immediately and Lindsay dialled a number.

It rang.

Lindsay waited.

And a sleepy voice answered: "Roberts."

"Lindsay, Jim. We've another one. Haynes just called. Heading for Mojave, should be arriving pretty soon."

"Haynes just called and it is due to land?" demanded Roberts. His voice seemed to come awake and alert instantly. "High speed, huh?"

"Yup."

"I'm shucking into clothing and I'll be in the scanning room of your ship in a few minutes."

Roberts hung up, making a remark about finding things in your own back yard. It was true, reflected Lindsay. The spaceport outside of the scanning room greenhouse lay darkly quiet. A few flickers of distant lights were caused by motion of men between them and him, and on the horizon he could see the soldierlike columns of the vertical boundary marker lights piercing the sky. Lindsay fumbled in a pocket, and swore because his cigarettes were in his battle shirt on the chair beside the bed, and he was still dressed in pajama top and trousers over the pajama bottoms. He wondered whether he could steal in and get cigarettes, or whether he'd better wake Jenna anyway, and wondered where she kept them in the ship—somehow he never really knew because there was always a package available when he wanted one. He wondered—

And the door opened and Jenna entered with a bright smile. "Cigarette, darling?" she asked. Over her night gown she wore Ralph's battle shirt. She was holding the lighter to two of them held simultaneously between her very red lips.

He would have forgiven her anything for that. And the fact that instead of being dull with sleep, Jenna looked fresh and bright gave the woman an added charm. "Ghastly time to be up and around," she observed with a smile. She handed him one of the cigarettes and glanced at the clock. "Oh-two-hundred," she said idly. "Pacific War Time. Thirteen hundred and twenty-seven day of. What's up, Ralph?"

Lindsay puffed deeply and let the smoke trickle out with his words. "Another one—high speed job."

Jenna nodded. "Roberts?"

"He's coming right over."

"I've coffee brewing. It hasn't landed yet?"

"Not yet, but we're expecting it any minute."

"We'll have time for coffee."

"We'll *take* time for coffee," said Ralph. "Roberts will do a better job for a bit of stimulant and something warm."

Jenna yawned and laughed at herself. Ralph turned as blue streamers cast flickering on the walls. Outside in the dark, ships of Terra's fleet were taking off, trailing their flares into the twinkling sky above then. They were getting out of range of the robomb blast; clearing the vast Mojave Spaceport. The marker lights winked off as the last ship left the port, and the sudden roar of the skytrain crescendoed and then died as the personnel of Mojave left in haste. Only the decontamination ship remained on the port.

Seconds later, a pale actinic glow suffused the area. The walls of the buildings glowed with it as the wall shields hugged the buildings and anchored them to the solid crust of the planet. In the ship a counting-rate meter climbed up the scale and a radiation identifier winked, indicating that it was very hard gamma that triggered the counter. The internal meter showed no danger inside of the ship; it was far enough from the nearest building on the port.

The door opened again and Jim Roberts walked in. "Give it to me," he said crisply, nodding cheerfully at Jenna.

Ralph's wife nodded back and then left to get the coffee. When she returned,

Ralph had explained to Captain Roberts fully.

"The devil," muttered Roberts. "Looks rough."

"We've been expecting the high-speed stuff, though," said Jenna, pouring coffee into three cups.

Lindsay opened his mouth to speak. You've—" he started, but he was interrupted by a ground-shaking rumble. Out of the dark California sky a juggernaut fell, its braking blast lighting up the area. The shrill of its passage came then, a lowering shrill that started up in the ear-splitting register and running down the scale like a dying siren until it was lost in a moan. The earth shook again as the monster hit the sands of the desert. It sent them high in a mighty impact crater, plowed its short furrow, and then at the bottom of its inverted cone it nuzzled into the ground and—started to tick.

Lindsay's jaw closed and he continued: "—been predicting it for a long time, Jenna." Then he laughed shortly and with just a bit of mirth. "I won't even let a Martian robomb interfere with what I intend to say," He became serious again. "No, Jenna, I think you're the only one who has been insisting that there will be a high speed job coming along."

Roberts nodded. "The boys at the driver labs claimed it couldn't be done."

Jenna smiled. It was an elfin smile that brought out the unearthly beauty of the woman. "That's because I'm Martian," she said simply. " I know how their minds work."

"That you do," assented Roberts, sipping his coffee. "No one but a Martian could have unpacked the Gooney."

Lindsay's face paled slightly. Reference to the first and only fuse that Jenna had ever dissected brought goose pimples to him. Up to that particular time, the Martians had never included killing charges in the fuses themselves. Once the thing was out of the robomb, the fuse could not harm any one. But this diabolical jigsaw puzzle was different. And Jenna had handed the three pellets to Ralph and then fled. Lindsay followed her drawings, and they all knew that no one but a Martian could ever have been able to follow the mechanical labyrinth of that fuse in safety. Yet they all knew that she'd been safe where not one of them would have been, for if she'd not asked, amusedly, for permission, the Gooney would have taken them, one by one. The Gooney had been dissected and the robomb it came with had been fitted with a Terran fuse and shipped back. All hoped it would give Mars as much worry as it had caused Terra.

"I've tried detonating it, and naturally, no dice," said Roberts.

"Better defuse it, then. You've hit it with everything?"

"Everything but another atomic."

"That's asking too much," said Lindsay. "They're packed to the limit with atomics now, and doubling the power—*brrrr.*"

"Well, said Roberts with a slight smile, "my gear is in the battle buggy. Outside."

"O.K.," said Lindsay. "We'll move back to a clearer area and set the recorders going. It's cold, for Haynes' outfit didn't so much as heat it on the way in. High speed job for fair, and probably loaded with mercurite."

The ship sat down again far enough from the buildings so that the green actinic light from the force fields did not rise to dangerous levels. The pale glow gave enough light to make the television cameras usable without any other artificial means, though the shapeless blob that was the battle buggy and Jim Roberts was hard to keep from losing with the unaided eye.

Roberts' voice came over the communicator. "O.K.? I'm about to go after that devil."

"Go ahead, Jim," said Lindsay. A few beads of sweat popped out on his forehead.

Jenna frowned. "It must be sheer hell to be like him."

Lindsay nodded, held a finger up to his lips. Jenna nodded, too, having been warned that the recorder was on, and also that Roberts could hear every word.

"I'm within one hundred feet of the crater, Lindsay. My first approach will be with the standard radiation detectors and the initial tools." This was well-known to all, but stated for recording purposes. "I have stopped the battle wagon at this distance. I am picking up my kit. I am stepping to the ground, now, and—"

He was interrupted by the kaplunking sound in the speaker. It was a cross, in sound, between plucking a screen door spring and dropping a boulder into a placid lagoon. A blinding flash of light burst against the dark sky, an expanding ball of flame raced skyward and died in a faintly luminous cloud that boiled upwards to a terrific height. Immediately afterwards, the ground shook madly. The

counting rate meter chattered and screeched as it overloaded and the radiation identifier winked furiously on all pilot lights, indicating all kinds of possible radiation. The pale actinic glow on the walls of the squat buildings flamed bright, wavered, flickered, paled again, and went out for good. The area and the ship was pelted with a fine rain of dirt, pebbles, and fused glass.

The roar of the sound came, then, a thundering tortured blast that tore at the planeted ship, whistling through the minute scratches from previous blasts, and producing a thrumming sound.

Quiet came once more, and only the faint buzz of the counting rate meter audio broke the silence.

Then a slight sob from Jenna.

And Colonel Ralph Lindsay took a deep, indrawn breath that shuddered his large frame.

He shook himself, and turned to his wife. "Get hold of yourself," he said harshly.

Jenna nodded, tossed away two tears, blinked her eyes and sat down weakly. "I'll be all right," she said. "I must."

"They all get it, sooner or later," gritted Lindsay. "That's . . . that's—"

"Shut up, Ralph," ordered his wife. "You'll be blubbering next. Save it for when you can. We've got work to do."

Lindsay looked at her, and as he looked, he calmed. "It's rather tough," he said. "There's been several . . . many. But few within sight. Well, he's gone and there's nothing we can do to bring him back."

"What makes it particularly tough is that Jim Roberts was the only one in the crew that was halfway stable, mentally," said Jenna. "The only one who was not carrying a mental load."

Lindsay nodded. "A case of having specialized mechanical ability and putting it to use in the best way. But Jenna . . . I'm . . . you're—?"

Jenna smiled. "We aren't," she agreed. She stood up and leaned against him lightly, and then moved into the circle of his arm. "But remember that neither of us is active in decontamination work General Haynes needed a stable man to direct the group, one that would correlate the information and keep it. Not one that he'd have to replace every few weeks. Losing Jim is tough. Better it have been one of the others; Lacy, who lost his family and the will to live at the same instant of blast; Grant, who is just a plain thrill-seeker and sportsman; Garrard, who does anything and everything without looking ahead because he is convinced that the Book of Fate has his every minute move printed in letters of fire; Harris, who saw his brother die and who now has a psychopathic hatred against the things but has no great dislike for the Martians who fashioned them. He hates our robombs as much as he hates theirs. Well—"

She was interrupted by the phone. Lindsay answered. It was General Haynes.

"Who?"

"Roberts."

"Bad?"

"As soon as the dust clears away we'll know. The force fields are usually good, and they kept out the radiation from the buildings. As soon as the surface activity dies out, Mojave will be workable again. We're leaving as soon as we can."

"Better mobilize your big men," said Haynes. "The second just hissed past us. Looks like a long siege. That one was mercurite, wasn't it?"

"Nothing else."

"Thought so. We saw the blast from here in space. Know what that means?"

Lindsay nodded and said: "It means they think they have an untouchable fuse. Otherwise they'd not bother sending the high-powered stuff over."

"Right. They'd not make us a present."

"Also, there is something about that fuse. Something, something. Look, sir, robombing is a fine art. There is but one defense against it—and that is for those who want to live to get out of the neighborhood. That's what the skytrains are for. That's why you send us immediate word when you have their course predicted. The secondary defense is not really a defense as it is a preservative measure. The force fields go up to protect man's work, and when the blast comes, it really destroys nothing. Then, after a given time, the people return and go to work in safety because the force fields kept the insides of the building from either destruction or radioactivity.

"Now," continued Lindsay, "that one went off within ten to twenty minutes after it landed. The immobilization period for that area is but a couple of days at best. If not touched, the fuse would tick away for weeks while the area stands idle. But not with this new, high-speed job that is also loaded with mercurite. Something—

"Where was this new job?" he asked, changing the subject abruptly.

"Headed for the Gary steel mills," came Haynes' answer.

"I'm putting in a call for my crew," said Lindsay. "We'll all meet in Chicago-South. There's something—" He shook the thought away with a violent shake of his head. "We'll find out in Gary."

He went to the general call phone and cut a tape, fed the end into the automatic transmitter, and checked to see that the general call was being transmitted. He wondered, briefly, just which of them would get to Gary first.

When the decontamination headquarters ship arrived, it was second. The little private strato-speedster that was Jack Grant's own pride and joy was sitting in the main landing field of the Gary port when Lindsay arrived. Lindsay sort of expected that, for Grant's little high-powered job placed the owner no more than a couple of hours from any place on Terra, most of which was spent in going up and down through the thicker atmosphere near the surface.

They landed, and the air lock clanged open. Moments later Jack Grant entered the scanning room with his usual whirlwind manner.

"What's cooking, Ralph?" he greeted, extending an eager hand. His free arm he swept around Jenna, giving her a vigorous hug and a kiss on the forehead. "Jenna, I swear you're more beautiful by the day. Please?"

"Please what?" she countered, freeing herself and backing off a bit.

"Please poison him and marry me?"

"Nope," she said with finality. "And I won't stand to see him . . . ah . . . removed, as you indelicately put it."

"Ralph, you wouldn't mind getting bumped off for your wife's happiness, would you?"

Lindsay usually lived through Grant's brash manner; made a mental apology for the man because he himself did not understand the kind of mind that saw little serious in life. And usually Grant's disregard of the serious side of life gave all a moral uplift, a chance to disregard with Grant all of the problems that hack and tear. But Lindsay had just seen Jim Roberts go up in a sun-hot inferno, and he was slightly sick with shock. Now, Grant's blithe manner seemed banal, crude; insufficiently sensitive. If Grant had no feelings, he should at least consider the sensitivity of others. Lindsay tried to cheer himself, and managed at best a weak, sickly grin that was lost on Grant completely. Lindsay might have made some biting remark, but he noted with some wonder that Jenna was not bitterly unhappy in the badinage. Jenna, he knew, could and would clutch hysterically at any light point in a crisis to gain just a bit of stability. Lindsay himself was inclined to cling doggedly to a situation, deviating not one bit, until it was finished satisfactorily. Then he would let down.

So noting Jenna's whimsical smile, he merely said, and it was with an effort: "Think it would make her happy?"

Grant laughed and hugged Jenna quickly and said: "Look, you don't mean she's actually happy—?"

Jenna nodded brightly, made a full turn to unwind Grant's arm from her waist and pirouetted over to her husband. That stopped Grant, and he smiled cheerfully and tried to look downcast.

"Love, unrequited," he sang in an off-tone basso, the opening bars of Gilbert and Sullivan's " 'Love unrequited robs be of my rest.' " Then he grinned. "Love unrequited and my boss and his best wife who haul me out of a sound and peaceful sleep to go out and pin a baby-blue ribbon on a Martian robomb. O.K., fellers, I'll pull its teeth and then, Jenna, may we continue where you left me off?"

"Been watching it?" asked Lindsay.

Grant nodded. "I've been here since it started in. The mills are clean, the force fields are up, and the temperature of the thing is low enough to handle by now. I'm ready."

"We're waiting," said Lindsay.

"Waiting?"

"For the rest of the crew, you know. This is serious."

"Well, it is in my district," laughed Grant. "Let the rest assemble. By the time they get here I'll have the fuse out and in one hand. Probably semi-disassembled."

"Jim Roberts was a good man," warned Lindsay.

"He was that."

"You're waiting."

"Why?"

"Because there seems to be more to this than meets the eye."

The door opened in time for the entering men to hear Lindsay's last words. Garrard and Harris came in quietly, sat down, and started to smoke. Garrard puffed his pipe with calm indifference, and Harris smoked furiously on a cigarette that he puffed into a long, hot ember

that almost burned his lips. Garrard spoke first.

"More than meets the eye, huh?"

Harris nodded, but his mind seemed elsewhere. "Mutants?" he said, giving the inert robomb out there a personality. Harris was pitting himself against a personality when he went to do his job. He had no real hatred for the Martians who engineered them, but he felt and acted as though he were pitting his brain against a wholly alien, inimical sentience.

Lindsay caught his thought, and though Harris was half solemn, the allegory fitted. For what are engineering improvements by a mechanical mutant?

Garrard smiled, and shrugged. "I say let's find out who is more ingenious," he said. "And let's do it quick. Grant, are the mills running on the servos?"

"Uh-huh, but it isn't good enough. There ought to be a human hand at the place instead of remote controls. I agree, let's get going before something happens to that load of steel out there. Stalling production is the only reason for robombing in the first place. Let's lick that fuse before they find out how much mercurite to put in in order to blast the force fields right out of the planet's crust," said Grant. "Go on with your lecture," he told Lindsay.

"Well, first-off, it's a new, high-speed job. It's also loaded with mercurite. They've, as usual, packed everything into their Sunday Punch. Their cocksuredness makes me certain that they think this fuse unremovable."

Grant turned to Jenna. "Jenna, you're of Martian stock, part way, anyway. Have any ideas?"

"Only to agree with Ralph. They wouldn't pack a robomb with mercurite if they thought for one second that it could be inerted. That would present Terra with a large volume of very valuable material. They have succeeded in one item, they've used a new high velocity drive in it. If they weren't certain of the ability of the high speed drive to escape all detector-driven gear, they wouldn't use mercurite. Mars is not profligate, Jack. Tossing away a robomb load of mercurite on a space-premature is not economically sensible. When they use mercurite, it must be nearly one hundred per cent effective."

"Um . . . interesting thought," laughed Grant.

"Like to try it out," said Garrard. "If they feel that certain, I'd like to know which of us is suitable to survive."

Harris blinked. He flipped the cigarette into the receptacle. "Let me at the stinking thing," he said in a flat voice.

"Wait for Lacy," said Lindsay.

"Lacy may be late," said Grant. It was one of the very few times that Jack Grant sounded solemn. He was almost pityingly solemn, and it made Lindsay wish for his return to the thick-skinned attitude, for Grant sounding solemn was strictly out of character. "He may be late," insisted Grant, "because he hates to come here."

"He won't deny a general alarm," said Lindsay.

"No, he will not. But I say let's not hurt the guy more than we have to. I say let's go out and pull that thing's teeth and save Lacy the hurt of seeing you and Jenna together."

Lindsay frowned. He wouldn't say it, but Jenna did. "Jack," she said softly, "is that a soft spot that makes you want to keep Tom Lacy from hurt, or are you just giving arguments to get out there and try your skill against that bomb?"

"A little of both," said Grant cheerfully. "Plus the fact that he makes me uncomfortable, somehow. It always makes me uncomfortable to see any man so tied up in his own past emotions that he cannot see clearly."

"Skip it," said Lindsay firmly. "I admit that he is too bound up in the past, but you, Grant, could stand a little more of his sincerity of emotion just as he could stand less."

Harris had been quite alert, and broke in at this point. "All due respects, Grant, but you run this as though you were playing a game. I know why Lacy is that way. His game was for the reward, yours is for the game's sake. He saw everything he'd spent his life for go up in a flaming volcano. Years of living, of loving, of building; puffed out in a millionth of a second. Puffed out, obliterated, disintegrated beyond all recognition. Grant, have you ever loved anything, deeply?"

Grant nodded. "All right, fellows, I'm sorry. I'm sorry that I don't understand Lacy better. I've loved, but I've never let it be my life. For when I've lost, there has always been something—or someone—else. Make off like my chips weren't in this deal, will you?"

"Still a game, Grant?" laughed Garrard. "A game where every throw of the dice is forecast is no game."

"What am I?" chuckled Jack Grant. "Just the baaaad boy of the decontamination squadron? Sure it's a game—

the whole thing is a game. And whether you're playing your brother for marbles or playing the devil for fame, you play to win."

"I say—" started Garrard.

Grant out-talked him. "*I* say that I am the master of my fate. And if anybody calls me Invictus Grant I shall cut his throat. Or her throat," he added, turning to Jenna with a grin.

The door opened again and Lacy entered. "Quite a conference," he said. "Well, Ralph, where is it and what's to be done?"

Lindsay brought him up to date. Then they ran off the recording of Jim Roberts' unhappy attempt.

"You may just be overcautious," said Lacy when the recording had finished. "It may have been a circumstance."

"Unlikely. The thing is . . . has too many facets. Jenna herself claims that a new item was expectable. Haynes had his statisticians at work, and their findings were that the quantity of late has been diminishing, which from past experience means that something new is due."

Jack Grant looked at Lindsay. "You don't suppose they're after the decontamination squadron?"

"If they were gunning for us," said Harris in a voice that shook with hatred, "they'd do it this way!" Then he settled back again. "But would they waste mercurite on us?"

"As a means of keeping production open, we're worth mercurite," responded Lindsay. "And it might take something more than the ordinary to go out and eliminate men who have made a business of defusing the things. Assassination is almost impossible.

"And," he said reflectively, "we may be barking up the wrong tree. All I know is that we've a brand new type, and as usual I've called the entire group in to get the initial factors all complete. Are we a bunch of persecution-complexes that we think they're after us?"

"No," grinned Jack Grant, "but remind me to tell that idea to Ordnance. Eliminating the decontamination squadron is like poisoning a city by shutting off its sewage system, perhaps, but it is effective!"

"We'll forget the personal angle until we get this one solved," said Ralph Lindsay.

"Well, let's go," said Grant eagerly.

"We'll take this easily," objected Lindsay.

"No gambling instinct?" queried Grant with an amused smile.

"That's why he's boss," said Garrard dryly. "Lindsay has neither an ax to grind nor an ego to build up."

"Huh?" asked Grant.

"Admitted . . . . and I'm sorry, Tom," said Garrard to Lacy, "that Lacy has his ax to grind. You, Jack, apparently get an egotistical lift out of this 'game.' Lindsay has neither."

"O.K., boss man," smiled Grant. "What do we do?"

"All the radiation meters we can pack into the battle buggy. Also we set up a radiating system near it. Then come back and we'll run through the spectrum to see. Now—"

"It's still in my district," reminded Grant.

"You're overeager," objected Garrard.

"And you're too complacent," objected Harris.

"Trouble with you," said Lacy, "is that you get too deep-set in pitting your skill against a mechanical puzzle and forget to tell us the moves."

Lindsay smiled sourly. "To finish this round robin, may I tell you *your* faults, Tom? You are inclined to make a false move. Not consciously, but there have been a few times when you came out by the skin of your teeth, having pathologically missed a fine point, and having caught it consciously."

Grant reached in a back pocket and rolled a pair of dice on the floor. "Roll for it?" he asked hopefully.

"Never touch dice," objected Harris.

Grant reached inside his jacket and fanned a deck of cards. "Cut?"

"Games," said Garrard sourly. "Games of chance in a preordained world—Bah!"

Jenna hit the table with her small fist. "Stop it, all of you! A finer collection of neurotics I've never seen collected under one roof before. And not one of you dare suggest that Ralph pick a man. Haynes would be wild if he knew that Ralph had been put into a psychological hole by being forced to send any man into . . . into . . . into that." Deigning to name the menace was itself a psychic block, but Jenna did not care. Instead of talking further, she reached for the deck of cards. "The thirteenth card," she said, starting to deal them off, "One, two three," placing them face up before her. "Lacy, hearts; Harris, spades; Grant,

diamonds, and Garrard, clubs. —Ten, eleven, twelve, and thirteen!"

The ace of spades.

Harris smiled, got up cheerfully, and went to get his trappings ready. Garrard grunted. "Games of chance," he sneered. "In a—"

Grant jumped up. "Look, Ed," he snarled. "In this completely preordained world of yours, how can an inhabitant know the will of the Gods of No-chance? What criterion would *you* have used to select Harris, huh? So if nothing else, the laws of chance do that much, to at the very least tell us who the Gods select. And so long as we ourselves do not know the answer, who cares if it is preordained?" Having delivered this, Grant looked at Jenna. "Bright girl," he said. "An instrument, if you admit Ed's plan, of the Gods."

Jenna smiled. "You mean 'whom the Gods—select,'" she corrected blithely.

Grant hauled out a flask, unscrewed a one-ounce cap and poured it full. "Here," he snapped, practically forcing it into her mouth.

Jenna spluttered. "Thanks," she said, calming.

Grant interjected with the remark: "We know how Lindsay feels, and it is not up to him to tell us. But I don't care whether it is predestiny or not, and whether we're all non-gamblers or goody-goody boys. But we'll use this set of cards for any future guesswork. See? And, we'll cut, ourselves. See? We'll not make the mistake of forcing Jenna or Ralph into dealing out a poisoned arrow."

"I wish people would stop worrying about my peace of mind," growled Lindsay. "I admit all that's been said. I am not to undergo any personal emotional strain. But being psychologically packed in cotton and linseed oil isn't good for me either."

"And all over one problematical bomb," smiled Jenna. "Why don't we wait. If the first one was coincidence, certainly the rest, after solution, will make us all feel like overwrought schoolgirls."

Harris returned at this point. "Ready," he said with a smile. His eyes were bright, and he seemed eager. There was an exultation about Harris, a bearing that might have been sheer theatrical effort, yet it seemed as though he were going out to do personal battle with his own personal devil.

Lindsay nodded briefly. "Give us every single smidgin of information. If you scrape your feet, tell us. Understand?"

"I get it. O.K., there's been enough time wasted. S'long."

His voice came clearly, and in the dawning light, the automatic television cameras adjusted the exposure as the dawn came brighter by the moment. The battle wagon headed out across the rough ground where the teeming city of Gary had lived a hundred years ago. A mile or two beyond, the battle wagon entered the parking area, now cleared of its horde of parked 'copters by the fleeing personnel.

The ship lifted and retreated a few miles, finding level enough ground to continue observation, and Harris went on and on.

"I'm stopping," he said, and it was faithfully recorded. "I'm about a hundred feet from the crater, setting up detectors and radiators. Shall I drive back or will you come in and pick me up? Seems to be safe enough. He hasn't gone off yet."

"We'll pick you up but quick. Ready?"

"Ready. Everything's set on the servos."

"O.K."

They met, immediately whisked into the sky and back to more than a safe distance. Then they went to work, searching etheric space and subetheric space for radiations. They hurled megawatt pulses of radio energy and subradio energy at the ticking thing. They thundered at it with audio, covering all known manner of vibration from a few cycles per minute of varying pressure to several megacycles of sheer air-wave. They mixed radio and audio, modulated the radio with the audio and hurled both continuous waves and pulsed waves, and mixed complex combinations of both. Then they modulated the subradio with radio, which was modulated with audio and they bombarded it with that. Rejecting the radiation bands entirely, they went after it, exploring the quasioptical region just below the infrared in the same complete manner. They fired at it constantly, climbing up into the heat waves, up into visible light and out into the ultra-violet. They hurled Brentz rays, Roentgen rays, and hard X. They tuned up the betatron and lambasted it with the most brittle of hard X rays. They hurled explosive charges at it, to shock it. Then they sent drone fliers, radio controlled, and waved reflecting masses

at it gently and harshly by flying the drones back and forth above it.

After three hours of this—and three more incoming robombs of the same type had been reported, they gave up.

"They're piling up," grunted Lindsay.

"Wish we could move it," said Grant.

"You always wish that. You tell us how to grapple with three hundred tons of glass-slick, superhard ovoid with a high diamagnetic surface and a built-in radiation shield. Moving them is the easiest answer—and the one initially avoided."

Harris blinked. "Nothing else?"

"There's nothing left but to go out and pull its teeth," said Lindsay. "Nothing we know can detonate the thing."

Harris smiled knowingly. "Naturally," he said. "Their point in life is to immobilize Terra. They must not go off until they are ready. They're willing to wait. They found out we could detonate them and then return to work in a couple of hours with radiation shields. So they now get a fuse that cannot be extracted and cannot be detonated until they want it to. Give 'em one chance to prove effective, and all Terra will be immobilized by them, and they'll drop everywhere. Also, maintaining the force fields takes a lot of valuable power. And if we shut off the fields, it might go up and then we'd lose the whole place."

"How I wish we could take pictures."

"Photographs?" asked Grant, smiling. "I saw one of them once. A family heirloom. Too bad, of course. But what do you expect when the whole world is living in a sort of bath of neutrons, and silver itself becomes slightly radioactive? After all, photography used to use a silver compound of some sort if my physical history is right."

"Silver bromide," said Lindsay slowly. "Look, Harris," he said, his interest showing where his mind was really working, "go out there and make a few sketches. Then come back without touching the thing. Understand?"

"Right."

"I am approaching the thing," he said from the field of action again. "I'm about two hundred feet from it. Working now with the projection box, sketching on the ground glass. This is a fairly standard model of robomb, of course. They load 'em with anything they think useful after making them at another plant, just as we do. The fuse—too bad they can't bury it inside. But it must be set, or at least available to the makers. If they should improve on it, it would be serious business to de-load these things to get to a buried fuse. Yep, there he is, right up on top as usual. Fuse-making has reached a fine art, fellows. Think of a gadget made to work at will or by preset, and still capable of taking the landing wallop they get. Well, they used to make fuses to stand twenty thousand times gravity for use in artillery. But this . . . well, Ralph, I've about got it sketched. Looks standard. Except for a couple of Martian ideographs on it. Jenna, what's a sort of sidewise Omicron; three concentric, squashed circles; and a tick-tack-toe mark?"

"Martian for Mark Six Hundred Fifty, Modification Zero," answered the girl.

"Some language when you can cram that into three characters."

"Well, I'm through. Ralph, so far as I'm concerned, this drawing will serve no purpose. Use that one of the standard model and have Jenna make the right classification marks across the fuse top. That's a better drawing anyway. I'm going on out and defu—"

The flash blinded, even through the almost-black glasses. It was warm, through the leaded glass windows. The eventual roar and the grinding hailstorm of sand and stone and sintered glass tore at the ship. The counters rattled madly and fell behind the driving mechanism with a grinding rattle. A rocketing mushroom of smoke drove toward the stratosphere, cooling down to mere incandescence as it went.

Miles away a production official watched the meters on his servo panel. They were stable. The buildings held. With the lighter radioactinic shields, work could be resumed in twenty-four hours. He started to make plans, calling his men happily. The bomb was no longer a menace, and the mills could get back to work.

"Harris," said Garrard solemnly. "So shall it be! Well, may he rest, now. Hatred such as his—an obsession against an inanimate object. I—"

"Shut up," said Lacy quietly. "You're babbling."

"Well," said Grant in his hard voice, "we can detonate 'em if we can't defuse 'em. Only it's hard on the personnel!"

Lacy looked up and spoke quietly, though his face was bitter. "Jack Grant, you have all the sensitivity and feelings of a pig!"

"Why . . . you—"

Lindsay leaped forward, hoping to get between them. Jenna went forward instinctively, putting up a small hand. Garrard looked at them reflectively, half aware of the incident and half convinced that if they were to fight, they would regardless of any act of man.

It was the strident ringing of the telephone that stopped them in their tracks; staying Grant's fist in midswing.

Jenna breathed out in a husky sound.

"Who was that at Gary?" asked General Haynes.

"We lost Harris."

"Same as before?"

Lindsay nodded glumly, forgetting that Haynes couldn't see him. Then he added: "Didn't even get close."

"What in thunder have they got?" asked Haynes. It was an hypothetical question, the general did not expect an answer. He added, after a moment of thought: "You've tried everything?"

"Not everything. So far as I've been able to tell, the things will sit there until we go after 'em. They'll foul up production areas until we go after 'em, and then when we're all gone—what then?"

"Lindsay! Take hold, man. You're . . . you're letting it get you."

Lindsay nodded again. "I admit it. Oh, I'll be all right."

"Well, keep it up—trying I mean. We're tinkering with the spotters and predictors and we hope to get 'em up to the point where they'll act on those lightning fast jobs."

"We'll be getting to Old London," said Lindsay. "That's next. Good thing they dispersed cities a century ago, even granting the wall shield."

"Good luck, Lindsay. And when you've covered all the mechanico-electrical angles, look for other things."

He hung up, but Lindsay pondered the last remark. *What did he mean?*

The ship was on its way to Old London before Lindsay called for a talkfest.

"We don't know anything about these things excepting that they go off when we approach 'em," said Lindsay. "Has anybody any ideas?"

"Only mine," grunted Jack Grant with a half-smile. "Something triggers 'em off whenever we come close."

"Couple of hundred feet," growled Lacy, "isn't close enough to permit operation of any detector capable of registering the human body without some sort of radiation output."

"Not direct detection," agreed Lindsay, facing Grant again.

Grant nodded. Then Garrard said: "I've an idea. But I'm mentioning it to no one."

"Why?"

"I don't want to tip my hand."

"Thought you weren't a gambler," jeered Grant.

"I'm not. I can't foresee the future, written though it is. I'll play it my way, according to my opinion. The fact that I feel this way about it is obviously because it is written so."

"Oh Brother!" grunted Jack Grant. "With everything all written in the Book of Acts, you still do things as you please because so long as you desire to do things that way it is obvious that the Gods wrote it?"

Garrard flushed. And Lindsay said: "Grant, you're a born trouble-maker."

"Maybe I should go out and take the next one apart. I'm still willing to bet my life against a bunch of Martians." Then he looked at Jenna. "I'm sorry, Jenna."

"Don't be," she said. "I may be Martian, but it's in ancestry only. I gave up my heritage when I set eyes on Ralph, you know." Then she stood up. "I'm definitely NOT running out," she laughed. "I'm going down to put on more coffee. I think this may be a long, cold winter."

She left, and Ed Garrard looked up at Lindsay, sourly.

"Well?" asked Ralph.

"Look, Lindsay, I may be speaking out of turn."

"Only the Gods know," chuckled Grant.

"Shut up, you're banal and out of line again," snapped Lindsay. "Look, Ed, no matter what it is, out with it."

"Lindsay, what do you know about this rumor about Martian mind-reading?"

"Very little. It is a very good possibility for the future, I'd say. It's been said that the ability of certain Martians to mental telepathy is a mutation. After all, the lighter atmosphere of Mars makes bombardment from space more likely to succeed."

"Mutation wouldn't change existing Martians," mused Grant. "The thing, of course, may either be a mutation that is expected—in which case it may occur severally—or an unexpected dominant mutation in which case its spread will occur as the first guy inseminates the race with the seeds of his own being."

"Right."

"You don't know?"

"No," said Lindsay. "I don't know which and furthermore it is unimportant."

"Might be," objected Grant. "How many are there and what is their ability?"

"There are about seventy Martians known to be able to do mental telepathy under ideal circumstances. Of the seventy-odd, all of them are attuned to only one or two of the others. So we have an aggregation of seventy, in groups of three maximum, that are able to do it."

"Is any of Jenna's family—?"

"Not that I know of. And besides, Jenna's loyal."

"They might be reading her mind unwittingly," said Garrard.

"Impossible."

"Know everything?" said Garrard, instantly regretting the implication.

"Only that Jenna's father was a psychoneural surgeon, and I've read plenty of his books on the subject. They're authoritative."

"Were, before the war."

Lindsay nodded. "You're thinking of some sort of amplifier system?"

Garrard nodded.

"I doubt it," said Lindsay.

Lacy looked up and shook his head. "It would have to be gentle," he said. "According to what I've heard, the guy who's doing the transmitting is clearly and actually aware of every transmitted thought that is correctly collected by the receiver. Couple a determined will to transmit with certain knowledge of reception, and then tell me how to read a mind that is one, unwilling; and two, unaware." Lacy snorted. "Seems to me we're getting thick on this." He arose and and left, slowly.

Lacy wandered into the galley and spoke to Jenna. "Mind?"

"Not at all," she said brightly.

"I need a bit of relaxation," he said. "We've had too many hours of solid worry over this thing."

She put a hand on his shoulder. "Tom," she said, "you're all to bits. Why don't you quit?"

"Quit?" he said dully. "Look, Jenna, I quit a long time ago. Fact of the matter is, there's not one of us but won't kill ourselves as soon as the need for us is over. Excepting you and Ralph. You—have one another to live for. We—have nothing."

"Grant?"

"Grant will be at loose ends, too. Remember, he has been seeking thrill after thrill, and cutting closer to the line each time. This defusing is the ultimate in nerve thrills to him, pitting himself against a corps of mechanical experts. Going back to rocket-racing and perihelion runs will be too tame. He's through, too."

"You all could get a new interest in life. You shouldn't quit," said Jenna softly.

"That's the worst of it," said Tom Lacy looking down at her. "I quit a long time ago. It's the starting-up that I fear."

"I don't follow."

"I think of Irene—and Little Fellow—and I know that when that area went up, my life ended. I've never had Harris' psychopathic hatred of the things. I've just felt that I'd like death, but want to go out doing my part. I have a lifelong training against suicide per se, but I euphemize it by taunting death with the decontamination squadron."

"Yes?" said Jenna. She knew more was to come.

"Alone I'm all right. Then I see you and Ralph. I feel a resentment—not against you, or Ralph, but against Fate or Kismet or whatever Gods there be that they should deny me and give to you freely. It's not right that I feel this way. Life is like that." He quoted bitterly: " 'Them as has, gits!' "

"Tom, I swear that if it were mine to do, I'd give you all the things you lost—return them."

He nodded. "Giving me wouldn't do," he said in self-reflection. "I'd want return—and that is impossible."

Jenna knew well enough not to say the trite remark about Time being the Great Healer. "Poor Tom," she said gently. Maternally, she leaned forward and kissed him on the cheek. An inner yearning touched him and opened a brief door of forgetfulness. He tightened his arms about her for a moment and as her face came up, he kissed her with a sudden warmth. In Jenna, mixed feelings, conflicting emotions burned away by his warmth. She responded instinctively and in the brief moment removed some of the torture of the lonely, hating days.

Then as the mixed thoughts cleared, Lacy found himself able to think more clearly. Though still flushed, he loosened his tight hold upon her waist, and as he relaxed, Jenna changed from the yielding softness of her to a woman more remote. Her eyes opened, and her arms came down from about his neck and she stepped back, breathing fully.

"Sorry, Jenna—"

She laughed. It was not a laugh that

meant derision; in fact it was a laugh reassuring to him, as she'd intended it to be. "Don't be sorry," she said softly. "You've committed no crime, I understand."

He nodded. "I was, sort of, kind of—"

"Tom," she said seriously, "there's a lot of good therapy in a kiss. So far as I know, you needed some, and I gave it to you, freely and gladly. I'll . . . do it again . . . when it's needed." Then she looked away, shyly.

A moment later, she looked up again, her face completely composed. "What do you suppose Garrard has on his mind?" she asked.

He told her, completely.

The scanning room was dark when they returned. Out through the viewport the actinic glow of the buildings cast a greenish light over the landscape, creating an eerie impression of the scene. The small buildings, widely scattered, were a far cry from Old London of the nineteen hundreds, with its teeming millions and its houses, cheek by jowl.

"Where's Ed?" asked Jenna, fumbling in the dark scanning room with the coffee tray.

"Gone."

"Gone?" she echoed. "How long ago?"

"Ten minutes or so. He should be there—"

Out, a few miles from them, hidden in the canyons of the buildings, a burst of flame soared up. A gigantic puffball that ricochetted from the actinic-lighted walls of the buildings and then went soaring skyward. A pillar of fire and smoke headed for the stratosphere as the counters clicked. The wall shields started to die out as the force of the explosion was spent.

Lindsay snapped on the lights. He faced them, his face white.

"That," he said harshly, "was Garrard."

Grant nodded. "It wasn't in his Book," he said.

"Neither," snarled Lindsay, "was it in his Book to keep his action secret."

"Meaning?" asked Grant.

"Who was the bright one that mentioned where he'd gone?"

"That should have been obvious," said Grant.

"Obvious or not—he's gone."

"What you're saying is that he's gone because I opened my big trap?"

Lindsay blinked. "Sorry, Jack. But I'm at wit's end. I do wish that he had his chance, perfect, though." He stared at Lacy.

Tom, remembering that he had been kissing the man's wife less than five minutes before, flushed slightly and flustered. He hoped it wouldn't show—

"Tom, that's a new brand of lipstick you're wearing, isn't it?" gritted Lindsay.

Tom colored.

Jenna faced her husband. "I kissed him," she said simply. "I did it as any mother would kiss a little boy—because he needed kissing. Not because—"

"Forget it," said Ralph. "Did you know what Garrard was thinking?"

"Tom told me."

"Nice reward," sneered Ralph, facing Lacy.

Lacy dropped his eyes, bitterly.

Jack Grant looked up. "Listen, Lindsay, you're off beam so far—"

"You keep out of this," snarled Lindsay, stepping forward.

"I'm not staying out of it. It happens to be some of my business, too. Lacy, this may hurt, but it needs explaining. Lindsay, I'm not a soft-hearted bird. I'm not even soft-headed. But if any man ever needed the affection of a woman, Tom Lacy does, did, and will. And if I had mother, wife, or sister that refused to try to straighten Lacy out, I'd cut her throat! I've made a lot of crude jokes about the fact that she married you because of your money or friends, but they were just crude jokes that I'd not have made if she hadn't been so completely Mrs. Ralph Lindsay that mere mention of anything else was funny. And you can scream or you can laugh about it, but whatever she did down in the galley, I say, makes a better woman of her!" Then Grant smiled queerly and turned to Lacy. "You lucky dog," he grinned. "She never tried to kiss me!"

Ralph Lindsay sat down wearily. "Was that it, Jenna?"

She nodded; unable to speak.

"I'm sorry," said Lindsay.

"Look, Lindsay—" started Tom Lacy.

Lindsay interrupted. "Lacy, I'm the one to be sorry. I mean it. Pity—is hard to take, even to give honestly. You don't want it, yet it is there. Yes," nodded Lindsay, "if there's anything, ever, that we can do to see you straightened out, we'll do it. Now—"

The phone.

Lindsay picked up the phone and said: "Garrard got it! Where's the next one?"

Haynes said: "Take the one in the Ruhr Industrial District. How'd Garrard get it?"

"We don't know. He went out un-

planned, wondering if utter secrecy mightn't be the answer."

"Too bad," said Haynes and hung up quickly. The general didn't like the tone of Lindsay's voice.

Lindsay faced them. "What do we know?" he asked. He felt that he'd been asking that question for year upon year, and that there had been no answer save a mystical omnipotent rumbling that forboded ill—and that threatened dire consequences if asked to repeat.

"Not a lot," said Grant. "They go off when we get within a hundred feet or so of them. That's all we know."

"Garrard went out without running his intercom radio. He made no reports, thinking that maybe they listened in on our short-range jobs and fired them somehow by remote control when they feared we might succeed in inerting the things!" Lindsay growled in his throat.

"Look, said Grant. "This is urgent. It is also knocking out our nerves. It's not much for a run from here to Ruhr Industrial, but I'm going to suggest that we all forget the problem completely for a few minutes. Me, I'm going in to take a shower."

The value of relaxation did not need pressing. Jenna nodded. "None of us have had much of anything but coffee and toast," she said. "I'm going down and build a real, seven-course breakfast. Any takers?"

They all nodded.

"And Ralph, you come and break eggs for me," she laughed. So far as I know, I'm the only one that's capable of taking your mind off of your troubles momentarily."

Lindsay laughed and stood up.

Lacy said it was a good idea, and then added: "I'm going to write a letter."

The rest all looked at one another. If Tom Lacy were writing a letter, it meant that he'd taken some new interest in life. Wordless understanding passed between the other three and they all left Lacy sitting at the desk.

The autopilot was bringing the ship down toward the ground out of the stratosphere, slanting toward the Ruhr when Jenna snapped the intercom switch. "Breakfast," she called. Her voice rang out through the ship. Grant came immediately and sat down. Lindsay was already seated. Jenna served up a heaping plate of ham, eggs, fried potatoes, and small pancake on the side. "This," she smiled, "is too late for a real breakfast, but I demand a breakfast even if it's nine o'clock in the evening when I first eat for the day. There's more if you're still hungry."

"We'll see," said Grant. He picked up knife and fork but stopped with them poised. "Where's Lacy?"

"I'll give another call," said Jenna, repeating her cry.

They fell to, attacking their plates with vigor. But no Lacy. They finished and still no Lacy. "Come on," said Jenna. "Maybe he's still feeling remorse. We'll find him and then we'll feed him if we have to hold him down and stuff him. O.K.?"

"Yeah," drawled Grant. "Feeding does wonders for my mental attitude. It'll do Tom good, too! Let's find him."

The headed for the scanning room, but it was empty. The desk where they'd left him was as though he had not been there, except—

"Letter?" queried Lindsay, puzzled. "Now, what—" his voice trailed away as he slit the envelope and took out the sheet of paper. He cleared his throat and began:

"Dear Folks:

"I put no faith in Garrard's suspicions, but since he was lost without an honest chance to prove them, I am taking this chance.

"I am taking my skeeter when I finish this and I'm going on ahead, alone. Knowing you as I do, I'll have plenty of time to inspect that robomb before you read this. I'm explaining my actions because I feel that you may need explanation.

"I think the world and all of both Jenna and Ralph, and feel that I may have caused suspicion and unhappiness there. Since I'll have time to take a good look at this thing and also make some motions toward defusing it long before you arrive, or even find this, let my success be a certain statement of the fact that knowledge of my actions by any of you—or even suspicion cast at the presence of the Decontamination Squadron Ship by the enemy—is not the contributing cause. No one will know until I'll all fin—"

Light filled the scanning room, and the ship rocked as it was buffeted by the blast. The light and the heat and the sound tore at them, and they clung to the stanchions on the scanning room until the ship stopped rocking and then Grant made a quick dash for the autopilot, which was chattering wildly under the impact of atomic by-products. It stabilized itself, however, and the ship continued on

down through the billowing dust to the ground.

"That," growled Lindsay, "loses us Lacy and proves nothing."

"Not entirely," drawled Grant. "It does prove that whatever agency is directing these things does not require the presence of this ship as a tip-off."

"A lot of help that is."

"Well, I'm nominated for the next try. Unanimously. I'm the only one voting any more."

Jenna gasped.

"What's the matter, Jenna?" asked Grant.

"I just realized that you were all that's left. Just like that—and in a few hours. Poor Lacy."

"Lacy?" said Grant. "He—got his release. It's what he's wanted. May we all find what we want as quickly."

"I hate to see any one courting death, though," said Jenna.

"My only regret for Lacy is that we don't know whether he—and Garrard, by the way—went in the same way."

"Meaning?" asked Grant.

"The rest got it as they headed out to defuse the things," said Lindsay. "At about a hundred feet. We can only assume that Garrard and Lacy went in the same way. I'd like better than an assumption."

"Why?"

"A hundred feet is too distant to detect the human body without radiation. It presupposes either a warning of some type or—" Lindsay scowled and stopped. He mumbled something about a conference with General Haynes. He stepped to the autopilot and set it for the next location. Then he left to seek the privacy of his own office from which to call General Haynes. As he left, Jenna lifted a worried face to Jack Grant.

"Jack," Jenna said, "he doesn't trust me any more."

"It does look bad," said Grant. "After all, every one of them came in your presence."

"They came in your presence, and his."

"Admitted. But—"

"I know," she said, with deep feeling. "But I can't help being Martian. My loyalty is with Ralph."

"Jenna," said Grant softly, "we know that. All of us know it. Yet, there's some agency that is tipping them off. There's been robombs at the other sites for hours now, and not one of them has gone off. They're tying up production until we arrive, and they'll continue to tie up the area until we make a false move. Something or someone is giving them the tip-off. I know it isn't me, you know it isn't you, and Ralph knows it isn't him. The areas are completely cleared, but, of course, there may have been watchers. But Garrard would have gone out unlighted, and possibly Lacy would have done the same."

"Jack," she pleaded, "do you suspect me, too?"

"Jenna, you know I do. I rationalize myself, and tell myself that it isn't so. But, nevertheless, there is that lingering doubt. Evidence, Jenna. Evidence."

"Jack, a criminal is considered innocent until proven guilty."

"Jenna, that's for the safety of all who may be accused. But considering a man guiltless does not prevent people from making charges. And there have been many occasions where the accused was forced to go through a strenuous period before proving his innocence. What they really mean is that they will not punish a man against whom no true conviction is brought. Until he is convicted, he can not be punished. And it is up to the authorities to prove his guilt. It is also up to him to prove his innocence. But considering him innocent permits his own testimony to be considered as valid as that of any witness instead of marking it off of the books as the word of a guilty man."

"And I?"

"Forgive me, Jenna. I think the world of you, and there is in me a rather violent mental storm. One side—the larger side, insists that you are loyal, and above reproach. The other side, that tells me to beware of the woman in you, that if you were really clever and treacherous, you would hurl these doubts out in the open and cause suspicion to fall upon yourself. And, you are Martian. A sort of racial instinct warns me. It's unfair, and I dislike myself thoroughly for it."

Tears welled in Jenna's deep eyes. "Jack, please. What can I do?"

"I don't know," he told her.

"I . . . feel miserable," she sobbed.

"It's a tough load to bear," he said softly, putting a hand on her shoulder.

"It's unfair," she said shakily. "Look, Jack, I know you too well to believe that hard exterior. You put that on because you're excessively soft inside and people can hurt you too easily if you're not careful. I am like that, but I'm not as soft as you are."

Jack laughed a bit. It was a false laugh,

designed to lift her out of the doldrums.

It failed.

"For eight long years," she said earnestly, "I've taken from Ralph everything that any woman would find ideal. I've had companionship, tenderness, love and affection. Complete compatibility. He's met my every mood. And not only because it will please me for him to mirror my moods, but because he feels that way too, and his moods change as mine do. He is absolutely happy to follow or lead me into any change of mood and we're never far apart. I've been protected and loved by the man I wanted. That's perfection.

"But for four of those years, I've been unable to reciprocate."

"Now, Jenna, that's not true."

"I love him—even more, now. And I'd do nothing to stand in the way of his happiness. But Jack, remember I'm Martian and he is denied his right to command a battle squadron. Because of me. He's stuck in this noncombat group—because of my heritage. In all that time, he has never shown it, yet he must know. If anything, he has become more tender, more protecting, more affectionate. More tolerant. Yet what can I do to give him release from this? Suicide isn't the proper answer. That would deprive me of what I want, and his desire is not completely to the service. But he cannot have his cake and eat it too."

"That's quite a load, Jenna," said Grant tenderly. "I hadn't realized."

"I ignore it, mostly. But there are times when it creeps up and gets me. I wake at night, thinking deeply. I fret, and go sleepless wishing there were a way out."

"I think you've well made up for it."

"No," she said with a shake of his head. "He must feel denied of his right to honor by his affiliation—made in the face of public objection to mixed-marriage. I . . . am now worse. An enemy alien."

"You are a Terran citizen," stated Grant.

"I have papers to prove it," she said scornfully. "And any doctor that didn't see the papers but examined me perfunctorily would pronounce me Martian. Ours will always be—a sterile marriage. It cannot be otherwise. Yet until this shadow came, we were both happy."

"Poor Jenna," said Grant, putting her head down on his shoulder and patting the back of it. "And now that the first doubt has crept in, the rest of Pandora's Troubles all came roaring in through the initial breach."

"And now this," she sobbed. "Grant, it's worse than torture."

Grant's mind whipped back and forth between several types of torture he'd heard about and wondered what she meant.

"No amount of torture could pry a secret from you, could it?" she asked.

"I like to think I'm that way," he said.

"You think a lot of me," she said. "Would you talk to save me from torture?"

A bead of sweat popped out on Jack's forehead as he thought it over. "That's a double curse," he said grimly. "You'd prefer torture to misloyalty and I'd be torn between the two because it is against all natural instincts for a male to harm a female. That's a forty-thousand-year heritage, Jenna."

"Well," she said, "I'm in that position but I'm without the means to say the word and relieve his torture."

"And he," said Grant, with feeling, "is pretty much in the same boat."

"Before this all happened there was enough to outweigh any doubt. But I'm practically accused of treachery."

Grant smiled tolerantly. "Most of that is in your own mind," he said gently. "You've kept your fears bottled up too long, and they're fermenting into all sorts of questionings and worries."

"Then I'm not really under suspicion?"

Grant laughed. "My dear, if they're reading your mind without your will, that's not treachery. Frankly, I've studied the problem myself, and I know that such is impossible. In no known science has there ever been a situation where a transmitter can be heard without the transmitter aware of its output. By 'transmitter' I mean people talking, men holding radioactives, radio, subradio, light, sound, and fury. Furthermore, since unwitting aid is ruled out, if such aid is given, it is given willingly. And that, Jenna, I refuse to believe."

"Truly?" she pleaded.

"I'll stake my life on it," he said. "All the evidence may be damning but somehow, it's too pat. Coincidence may be a little strained, but far from improbable in any sense. Fact of the matter is, Jenna, there's no sense in going out on the Q-T. I'm going out with all recorders open and working furiously. I'm going to record not only my ideas, but my transient thoughts and my overt acts. I'll

show 'em a bold front. And, by showing a bold front, I'll win. And if I do not, you'll all know just what goes on and you'll know how to act on the next one."

Grant laughed and shook the girl gently. He removed a handkerchief from his breast pocket and dabbed her wet eyes with it, and told her to get that elfin chin up again.

"Thanks," she whispered, the tears welling up again. "Thanks, Jack . . . for . . . faith!"

When the door opened to admit Lindsay, her face was once more composed. She put down her cigarette and said: "Any ideas, Ralph?"

His worried face grew darker. "It seems to get down to the problem of defusing a bomb that explodes when you approach it with that intent."

Grant laughed. "As I said before, we can detonate 'em but it's hard on the personnel."

"Oh, Jack!" cried Jenna.

"Well," he grinned, "it's true. And regardless of whether we lose a few fellows who'd prefer death anyway, we are most definitely keeping the production areas uncontaminated. That's something."

Lindsay scowled. "It's not good enough," he said. "A man's life should be worth more than that."

Grant shook his head. "It's more than mere production, Ralph. Production means many lives. And is one man's life worth more than many men's?"

"To me, my life is."

Grant laughed, taking the sting out of his matter-of-fact statement, "You're selfish."

Lindsay nodded glumly. "I admit it. "How're you going to tackle that one out there?"

"Boldly, brashly, and brazenly. Whatever agency is manipulating these things will find me slightly different. I hope I'm confusing enough to make them wonder."

"I wish—" said Lindsay.

"Forget it," said Jack. "I've got to go, and there's little sense in stewing about it. I'll be back, and then we can handle the rest of these things with ease. No chin up, fella. You're in the hot spot of doing a hard job."

"I know," he muttered.

When he looked up, Grant had left.

Lindsay passed his hand over his face with the gesture of a completely baffled and worn-out man. He looked up at his wife. "Jenna," he pleaded, "is there—?"

"Don't you trust me, Ralph?"

"My whole being cries out to trust you, Jenna. But there is still wonder."

"There is nothing I can say that will erase that. Nothing. If I am actress enough to play treachery, I'm also liar enough to swear a false oath."

Lindsay nodded.

"Nothing," she repeated dully.

"You think a lot of Grant," he said flatly.

"I've loved them all," she said.

"Grant more than the rest."

"Jack, despite his hard exterior, is an understanding soul."

"That may save him," muttered Lindsay.

"Ralph!"

The jocular voice of Jack Grant broke in: "I'm taking off in the battle buggy now."

"And then again it may not," said Lindsay harshly.

"I'm not a machine, Ralph. I'm a woman."

"So was Circe!"

"Is that what you think of me?"

The loudspeaker chattered: "This is no road for a human being, folks. They paved it with rubble, I think. My tools are rattling around like mad. If any agency is using anything for detection, they're listening to the rattle of machinery in this battle buggy."

Jenna and Ralph faced the radio panel and both hated it for its flat tones. But they could not turn it off.

"He'll go like Roberts, like Harris," snarled Lindsay. "Like—Lacy."

"No!"

"We'll see," he said tritely.

Silence fell, and then the voice again: "I'm approaching the thing. Y'know, it's fearfully quiet out here with the area evacuated and all machinery stopped. The wall shields make the landscape unreal, like the ghost-sequence in a horror movie. Terra was never intended to be seen under a greenish light. You know how people look under mercury vapor lights? That's how Terra looks, sort of."

"Jenna?"

"Yes Ralph."

"You're not . . . you're not—?"

"What can I say?" she pleaded. "I'm only human."

He looked up bitterly. The question was in his eyes. He did not need to voice it. Jenna knew what he was thinking. And he knew that she understood, for the hurt was in her eyes.

"Hey!" came Grant's voice. "I've got us a mascot! C'mere, Ears. Nice fella. 'Tis a woebegone pup, spaniel. Lonely and aching for someone to scratch his tummy. Up, Ears! You're my good luck! The mutt is sitting on the seat like he knew what it was all about. A sharp little rascal. I'll bring him home to you."

Jack drove on, one hand on the wheel and the right hand on the dog's head, stroking gently. *Who,* he wondered, *would leave a pet in a contaminated area? Abandoned to something that no dog could possibly understand.*

And he thought, briefly, that he and the dog were in the same boat.

"You can carry my tool bag," he told the pup over the rumble of the battle buggy.

Jenna and Ralph listened to Grant talking to the dog. The man rattled on, speaking lightly, caressingly to the animal, and his words were banal to the tensity in the scanning room.

"I wish I knew," said Lindsay.

"Ralph, stop it!" cried his wife. "Stop playing around the point. If you think I'm guilty, come out and say so!"

"I'm . . . not certain."

"Have you no faith in me?"

"Jenna, I—"

"Folks, I'm stopping the buggy, and Ears and I will go over and see that thing right now. So far, there's been no mental disturbances, Jenna. That's the one thing I'm watching for."

Lindsay looked at her.

"I don't feel anything," she said. He wondered, again, and it was in his face.

Her voice went out, and Grant answered. "If either of us feel anything—?"

"I'll let you know," she promised.

"Will you?" muttered her husband.

"I will," she blazed at him.

"Lindsay," snapped Grant, "get off of it! Jenna has no more treachery in her soul than I have, and I know my own heart!"

Ralph Lindsay calmed. Jenna looked at him and knew that the man outside was a sort of safety valve. Her husband was on the verge of breakdown, she guessed, and she was in a nervous state herself. The man out there had been holding the group together for hours, now. What would happen if he went—?

"No!" she pleaded.

But something inside of her knew that he would go, like the rest.

"No!" she said with a half-scream.

"'No' what?" asked Lindsay.

"Grant mustn't!"

Lindsay looked at her. "Isn't that his job?" he said flatly.

"Yes, but—"

"Perhaps you can fix it," said her husband cynically. She looked at him in disbelief. Was this the man she loved?

Then he turned the knife in the wound. "Or," he said vindictively, "is that *your* job?"

"Lindsay, shut up, you fool!"

Lindsay opened his mouth and then closed it again. "Trouble with you, Lindsay, is that you've a rankle or two in your system which should have been burned out a long time ago. Don't you know that every man reaches a crossroad every day? There's not one of us who mustn't give up something to get something else. That's why we have asylums—for people who can't make up their minds, or people who dislike their decisions and try to go back, mentally. The normal man accepts his decision and uses that as experience in making the next one, instead of sitting there, spending his life wondering what if he'd taken the other road. Add up your life, Lindsay, and see whether the credits are better than the debits. You can't have everything!"

Then the tone of his voice changed.

"I'm leaving the battle buggy now, and Ears and I are approaching the thing. I have no fear of it, really. I'm . . . curious. What makes these things go off? This, fellers, is a physical phenomenon, developed by human beings—"

"Martians," corrected Lindsay.

"They're classified as human," snapped Grant. "And a lot of them are more human than the pure-white Terran. Spinach, I call it. Anyway, there is a simple explanation for all this and when it is uncovered, all of your rantings and raving will go to pieces like a bit of charred paper. Call it telepathy if you want—I'm not discounting though I'm skeptical—but I don't feel any warnings yet."

Jenna sat down, closed her eyes, and composed her body into a relaxed pose. She said nothing. Lindsay noted, and said: "Keep it coming, Grant."

"Well," said Grant, "we're at the critical hundred feet, Ears and I. Come here, mutt! That thing is dangerous! Dog doesn't care, folks. Y'know, there's nothing like having a mutt around to teach you faith. Jenna?"

She opened her eyes. "Yes?"

"I'm going in! You're Martian and you're sensitive. Maybe you can catch

the backwash if there's any mental shenanigans."

"I'll try."

"Believe it now?" called Lindsay.

"Not entirely. But I'm not missing any bets. Now, I am taking my little hatchet in one hand and I'm going out to . . . *Jenna! You—!*"

The storm burst, the sky flared bright, and the waves of sheer energy beat the ship, stormed in through the windows and the radiation counter shrilled madly. The pillar of fire mounted like a rolling cloud, reaching for the sun.

"Grant," said Lindsay with a dry throat.

Jenna sobbed.

"What did he mean?" demanded Lindsay.

Jenna shook away her tears, swallowed deeply. "I know," she said, "I know."

"You—?"

"I caught it," she said.

"Then it was you," he snapped harshly. "Tell me, Jenna, what kind of enticement did you use to get him going?"

"You fool," she snarled at him. "Blind, stupid fool!" She stood up, blazing. "Yes," she said. "I've taken all you gave me, and took it gladly, happily. And I hoped that I could make up to you for . . . for . . . causing your loss. Yet you've never forgotten that I'm Martian, and that if you'd married a Terran you could have the plaudits and the admiration due any fighting officer. That's rankled in your soul until you hate me!" she screamed. "And what could I do? I'd have made it up to you," she said, her voice quieting, "but I didn't know how. And now you think I'm responsible. Well," she said accusingly, "how. do I know but that you are planning revenge on Terra for being blind."

"Jenna, you—"

"Well, I do know. And if you think that I'm—"

"What do you want me to think?" he asked her. "What were Grant's last words?"

"He—"

"Accused you!"

Jenna turned quietly. She stopped at the door. "I solved one fuse because I thought Martian," she said quietly. "I'll solve the next one for you! You've wanted to be free to join the Corps in space. Then follow me close, because when I solve this one there will be no question.

"Jenna—what is it?"

"It is the fuse itself," she said. "A rudimentary brain that reacts upon receiving any thought of removal when that thought originates within a hundred feet or so."

"Utterly fantastic!"

"Is it?" she asked. "Watch!"

Jenna passed through the door and left. Moments later, the whine of a skyplane crescendoed and diminished. Jenna was heading for the next site. Lindsay sat for a long time, his mind whirling.

Jenna was right. He'd been fretting over his denial of the right to command. It hadn't been fair. A group of psychoneurotics—commanded by one. Himself. Not denied the right to command because of his wife, but because of his psychotic nature. For one, any Terran who would enter a mixed-marriage was not possessed of the normal adjustment, and the same true of any Martian. Secondly, were he normal, fighting in combat would produce a psychotic condition since he'd be set against his wife's countrymen.

He leaped up and ran to the driving panel. Harshly he threw the autopilot out of gear and took the controls himself. The ship took off raggedly and hissed through the upper air, racing.

"Jenna!" he called into the radio.

No answer.

"Jenna! Turn on your receiver! Please," he begged.

No answer.

His trembling hands turned up the power and the ship shuddered at the overload drive. The upper air shrilled against rivet head and port sill. The burble point came and the ship shook and rattled terribly. Yet he knew that he had but an even chance. For Jenna was driving a superspeed plane that could race as fast as the big ship—with less danger in atmosphere.

No spacecraft was made to travel horizontally across a planet. But Ralph Lindsay in a frenzy, swore at the sidelong pace, and turned his ship to arrow through the upper air. The burble died, but throughout the ship came the rattle of falling objects, dumped from table and shelf.

He continued to cry into the microphone, and strained his ears for the answer that was not there.

He depressed the nose of the ship and went into a steep, screaming dive.

He—saw her. A minute speck, even through the telescope.

And at the moment he saw her, she stepped from the plane onto the ground, and spoke to him through the radio.

"I've no receiver on, Ralph. But listen and stay back!"

"Jenna!" he screamed.

"Your duty, remember?" she said quietly. "It is to solve these—things. Your duty, I took away, and now I will return it."

"Jenna!" he pleaded. "I don't want—"

In futility he gave up. She could not hear. An hypnosis took him, held him in its grip.

"Ralph," she said. "Watch carefully."

He shook himself.

Angrily, he fought the controls. Madly he tried to urge another dyne from the drivers. He would be—too late.

"Jenna! Don't!"

"Ralph, I'm approaching the bomb. I am now seventy feet from it. See?"

"Seventy feet?"

"I'm seventy feet from it, Ralph, because I've thought only of you. Not once have I thought of defus—"

The blast caught the diving ship and stopped it in its track, turned it end for end and sent it rocketing crazily away from the mad scene of turbulence. It arched high into the sky, tumbling. Numb, Lindsay reacted automatically. War, hatred, suspicion. All boiled up in his mind.

The answer. It was clear, finally. The how and the why and the wherefore. His problem—solved.

But the solution was bitter in his mouth.

Instinctively driving the ship toward the next site Lindsay's eyes still saw the pathetic figure silhouetted against that intolerable blast. Solution? She had given him both solutions.

His mind went back through the years. She'd been his, completely. He'd known all the happiness any man needed. Now he was free to take his place—and he didn't want it. What was honor? A mind, clinging to its own ideals. Was there more honor in clinging to his choice or in becoming a public figure, abandoning his choice.

No, Jenna hadn't given it to him. He'd taken it.

More balance, more sensible evaluation of his own set of desires would have kept him from driving her—

He landed his ship flatwise, furrowing the ground. Blindly, he looked across the field toward the—ticking thing.

"Blast!" he snarled at the thing.

He selected tools. Then he faced it again. "Go ahead. Explode." Briefly, he wondered how it would feel—and if any feeling were possible in microseconds.

"I'm coming," he told it.

He hit it a ringing blow with a sledge hammer. "Blast!" he cried angrily.

Down within the robomb, a lacery lacework of silver in a mass of complex hydrocarbon dielectrics sent impulses along flowing filaments of metal to other shapeless tangles of silver globs. Countercurrents flowed back and the filaments of metal became a tangled highway of multi-purposed impulses. Countercurrents canceled and mixed with flowing currents, creating new wave shapes that flowed in both directions from the mixing point, and the silver-shot masses at either end of the multitudinous filamentary transmission lines accepted the false wave shapes, became confused by their unfamiliarity, and sent forth more shapes of meaningless nature.

It was unable to cope with a situation whereby it was commanded to explode. The right act—upon that stimulus—had not been taught—built into—it.

And still the thoughts beat upon the rudimentary brain.

Lindsay climbed atop the thing. "Blast!" he screamed.

The leering face of a Martian looked up at him, and smiled sneeringly. Lindsay snapped his cutting torch and thrust the white-hot flame in the Martian's eye, and the face distorted and became Jenna. She lifted a hand and pushed the flame away. It went, cutting the hard metal around her face. Characters were burned in her forehead, and he read them without understanding. Tiny hands came out through the cut in the metal and wiped Jenna's face from the top of the fuse. They took the white-hot flame in their hands and directed it.

He lifted. He struck at Jack Grant's laughing face with a bar and drove it loose.

"Blast!" he told Jack Grant.

Violently, he pried upon the thing. It came up slowly, like Circe, rising out of the sea—or was it Venus—or Jenna. It was exquisitely formed, delicately shaped, but his hands took it and crushed the softly curving figure into a geometrical cylinder, and the softness left it as he lifted it out of the body of the bomb.

From the vacant hole there came a small flow of neutrons and they registered on the counter he wore.

Lindsay jumped down, the mists clearing. He looked at the thing in his hands

and laughed. The laugh welled up and broke into a wild sob. Lindsay crumpled to the ground, holding the fuse in his lap and crying over it.

He cried with grief, raved at his own madness. He ignored his own loss, for had he admitted that, he would have gone mad once more.

Paradox, paradox. He—who had tried to force death—was unable to do so. He was alone and a failure. He hurled the fuse at the vast shell of the robomb.

"Stinking failure," he snarled at it. Then came clearness. He picked up the fuse once more and looked at it. Somewhere in his cloud of madness he had succeeded in defus—

The auxiliary detonator went BANG! and startled him from the last hazy mists of madness into cold reality.

Once back in the loneliness of his ship, he called Haynes. He reported all, in a dull voice and asked for help. Later, the help came to find Lindsay working over the two-ended artificial mind, measuring minute electronic impulses and stimulating the nodules of the filamentary connectors to see what happened. From this sample, he knew that the Terran Technical Corps could devise a means of confusing the mental fuses in other robombs.

Ralph Lindsay concluded his lecture to the members of his reconstructed Decontamination Squadron. Then he turned away from them and a bitterness twisted his mouth as he looked up into the sky at the flight squadron that was passing overhead.

It still was not for Lindsay.

He picked up the counter-mentapath and started the battle buggy across the rough field toward the waiting Martian robomb. In the back of his mind was a half-formed prayer that some day he might find one too complicated for him. But until that day he would search for that peace he knew that he would never find.

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MEGOPOLIS

We, products of an Age of Cities, find it hard to consider a cityless, or a near-cityless culture. But it looks more and more as though the New York City of today is a phenomenon unique in the history of Man—truly unique in that nothing like it existed before, and nothing like it will ever again exist. The super-giant city is a passing phenomenon of unstable culture—a thing that does and can exist only between two periods.

Actually, to build New York as it is, high development of large machines is essential—it takes large machines to roll girders, hoist giant beams, move the immense tonnage of skyscrapers. It takes great machines to build the tunnels and bridges that handle the traffic of a gigantic metropolis. Before those things become available, the super-giant city can't exist. Certainly a city sprawling over a thirty-mile radius can't come into existence when horse-and-wagon transportation is the only available means of shipping supplies. Only when a mechanical transportation age starts can such a city exist.

But when transportation is good, fast, economical—then the city has no reason for existence. If transportation can cover hundreds of miles, there's no need to concentrate in a few tens of miles. In fact, there's every reason for *not* concentrating. At present New York, like other super-metropolitan centers Los Angeles, Chicago, London and others, is suffering hardening of the traffic arteries. New Yorkers can't own automobiles; there isn't room for them. Angleanos can—in fact must, because of the widespread city. But they're traffic bound, too. The cities are too big. The light plane, that should help solve the average man's transportation problems, is impossible in the city areas—no room for landing fields.

Suppose we had those trick walls that Van Vogt uses in his stories—the ultimate in transportation. You simply step through the wall, and are at your destination. That would unfreeze the traffic arteries of the cities—perhaps. (Van Vogt doesn't say how these walls are tuned to each other, but it's worth noting that the 30,000,000,000 cycle spectrum of radio is completely clogged, or will be when apparatus already ordered is installed. All the distinguishing characteristics of frequency, polarization and direction available in the microwave spectrum are already needed in New York for communications services. There would be a limit to the number of "walls" that could be installed probably—but let's ignore it.) Still, the city can't exist. If it's as easy to cross a thousand miles as to cross a corridor, through one of those walls—why concentrate in the cities, when all the world is available, and real estate is cheap?

The super-giant city can, apparently, come into being and exist only during the period between the time transportation is just good enough to allow sufficient food and other supplies to reach the city, but before transportation is so good that remoter, pleasanter areas can be equally accessible.

All these conditions are, of course, aside from the basic original reason for the rise of cities—and their present situation. The cities started—actually small town, in the modern sense—as defense centers, as forts wherein the population behind the city walls was safe from the nomad attackers. The location of the larger cities was determined then, too, by transportation—the only cheap, high-capacity transportation they had at the time. And that meant a good harbor, whether on a large navigable river, or on a sea.

Today, of course, the defense picture is reversed. The threat of atomic warfare is leveled almost solely against cities, but eventually that threat will pass, too, as far more advanced science finds a real answer. Still—the super-giant city will be impractical. The same advanced science will, unquestionably, improve transportation, which is the death of cities.

The interstellar exploration commanders needn't worry too much about investigating the worlds which have great cities; they won't have attained any such high level of transportation as a faster-than-light ship. The ones to approach with care will be the pastoral worlds, with small private air vehicles darting from little country town to small village to private farm-cottage.

The Editor.

WHY WORRY?

WORRY uses an immense amount of vital force. People who worry not only use up their energy during the day by worrying, but they rob themselves of that greatest of all restoratives, sleep. People who worry can't sleep. They lose their appetite. They often end up by getting really ill. How often have you heard it said, 'I am worried to death!'?

What do you suppose would happen if a person who was putting himself into mental, moral and physical bankruptcy by worrying were to convert all this worry-energy into constructive action? In no time at all he would have accomplished so much that he would have nothing to worry about.

Nothing is more discouraging to a worrying person than to have someone say, 'Oh, don't worry, it will all come out right!'

That is not reassuring at all. The worrying one can't see how it is going to come out all right. But if the men and women who worry could be shown how to overcome the troubles and difficulties that cause worry, they soon would cease wasting their very life-blood in worrying. Instead they would begin devoting their energies to a constructive effort that would gain them freedom from worry for the rest of their lives.

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